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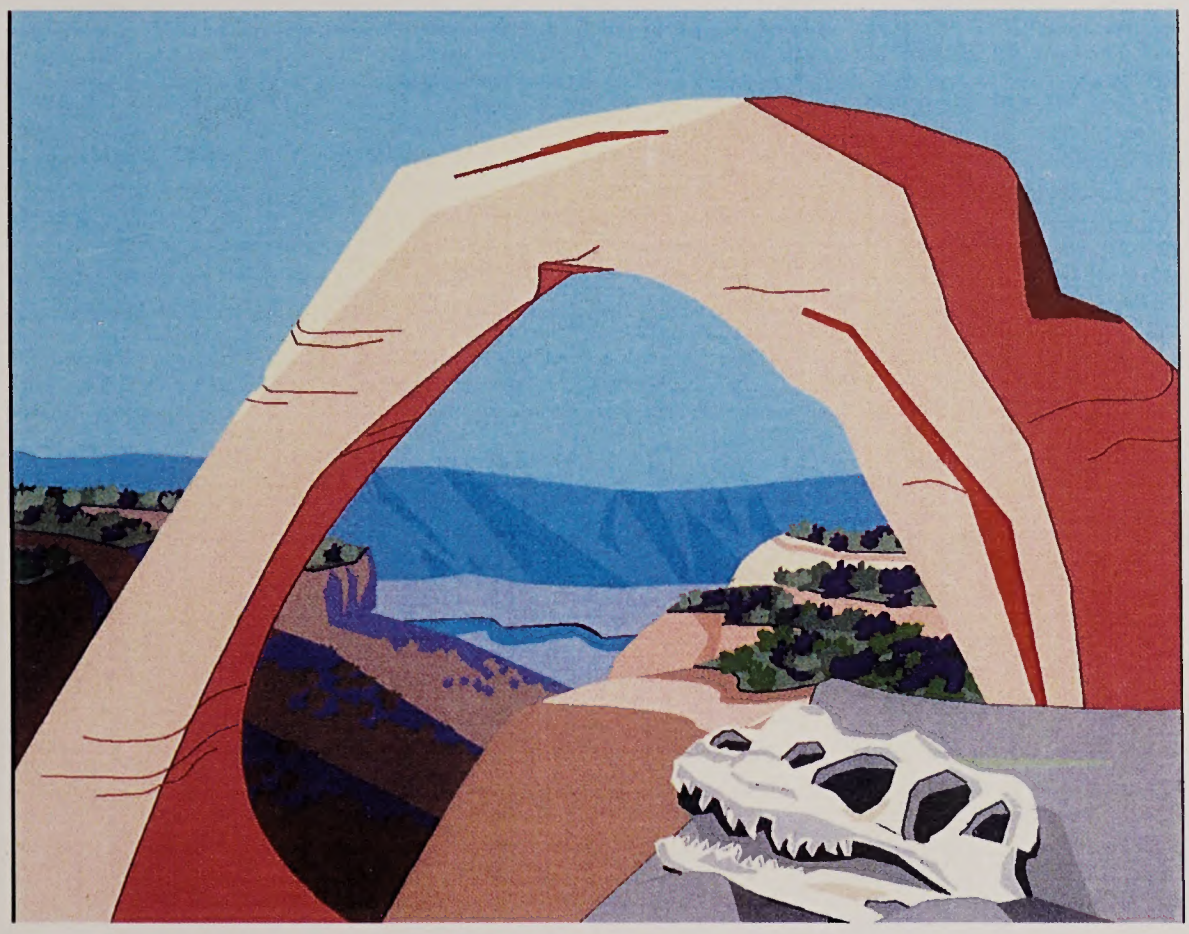
RESOURCE MANAGEMENT PLAN
AND
RECORD OF DECISION

FOR THE

McINNIS CANYONS
NATIONAL CONSERVATION AREA
AND
BLACK RIDGE CANYONS WILDERNESS



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT
Grand Junction Field Office
Grand Junction, Colorado

September 2004

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2004

Effective Jan. 1, 2005, the Colorado Canyons National Conservation Area has been renamed McInnis Canyons National Conservation Area in honor of former U.S. Representative Scott McInnis (P.L. 108-400).

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Grand Junction Field Office
2815 H Road
Grand Junction, CO 81506

In Reply Refer To:

8014 (CO-134)
Colorado Canyons NCA RMP

Dear Reader:

Attached you will find the Colorado Canyons National Conservation Area (CCNCA) Resource Management Plan and Record of Decision (RMP/ROD). The CCNCA encompasses approximately 122,300 rugged and scenic acres of public land administered by the Bureau of Land Management (BLM) in Mesa County, west of Grand Junction, Colorado.

The CCNCA RMP/ROD describes the management prescriptions developed for the long-range protection of the Colorado Canyons National Conservation Area and the Black Ridge Canyons Wilderness. The CCNCA RMP/ROD was developed through a collaborative effort between the BLM and a ten-member Advisory Council, four citizen-based working groups, and representatives from a wide variety of user groups.

Thank you to all who helped make this planning process a success. To all of you who enjoy the wide variety of opportunities available on these outstanding public lands, we look forward to working with you in the future as we continue our efforts to protect and enhance the Colorado Canyons National Conservation Area.

Sincerely,

Raul Morales

Raul Morales, Manager
Colorado Canyons
National Conservation Area

ITEM HAS BEEN DIGITIZED

MISSION STATEMENT

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the Nation's public lands for the use and enjoyment of present and future generations.

ITEM HAS BEEN DIGITIZED

Manager's Recommendation

Having considered a full range of management alternatives, associated impacts and public input, I recommend adoption and implementation of the attached Colorado Canyons National Conservation Area Resource Management Plan.

Raul Morales — 10/28/04

Raul Morales, Manager
Colorado Canyons
National Conservation Area

Date

Catherine Robertson — 10/28/04

Catherine Robertson, Manager
Grand Junction Field Office

Date

State Director Approval

I approve the attached Colorado Canyons National Conservation Area Resource Management Plan, as recommended. This document meets the requirements for a Record of Decision, as provided in the Code of Federal Regulations part 1502.2 and for a resource management plan as described in 40 Code of Federal Regulations 1610.0-5(k).

Ron Wenker — 10/28/04

Ron Wenker
Colorado State Director

Date

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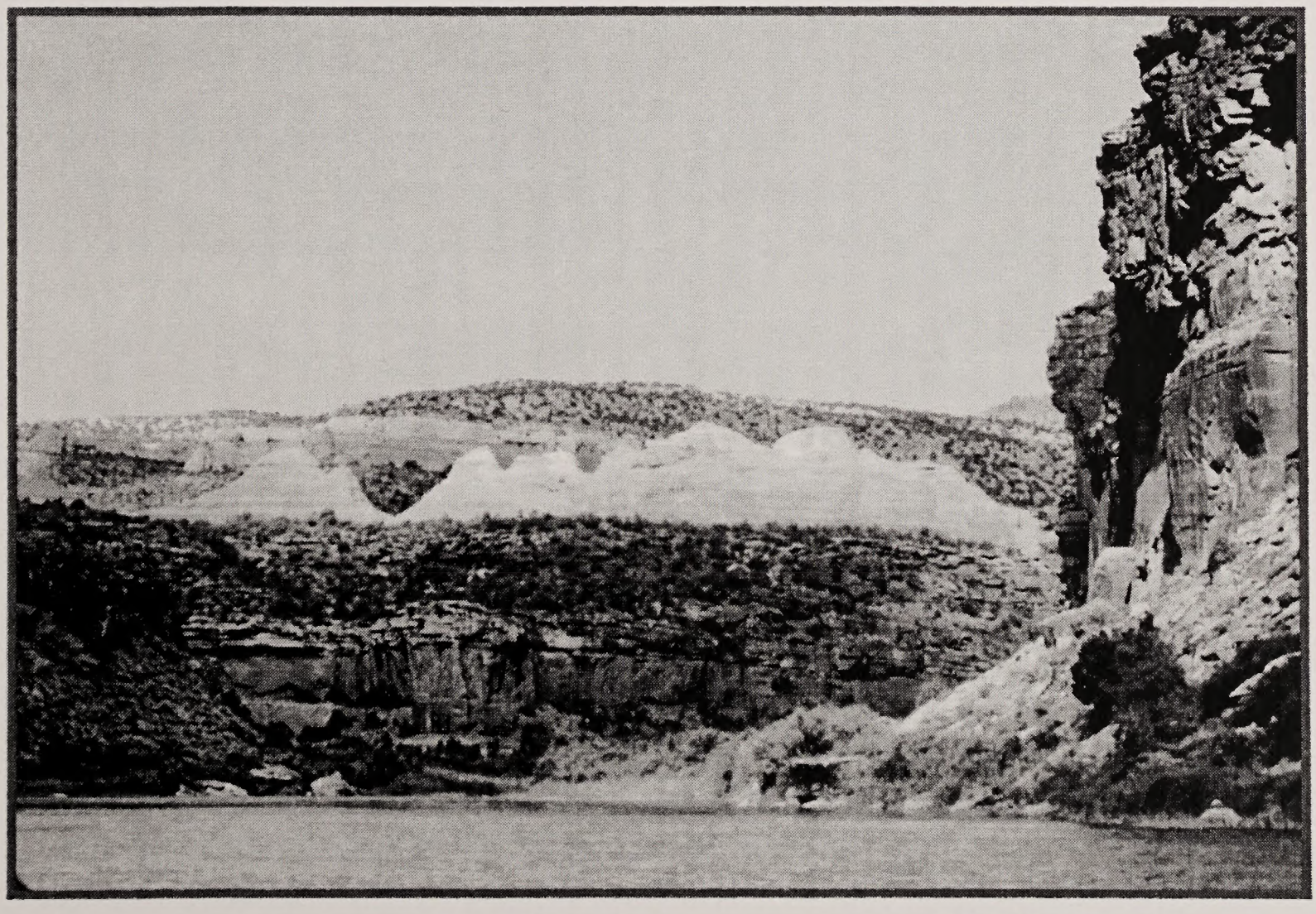
ACRONYMS

-A-	
ACEC	Areas of Critical Environmental Concern
AC	Advisory Council
ARPA	Archaeological Resource Protection Act
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
-B-	
BBM	Benefits Based Management
BA	Biological Assessment
BLM	Bureau of Land Management
BMP	Best Management Practice
BRCW	Black Ridge Canyons Wilderness
-C-	
CAA	Clean Air Act
CCNCA	Colorado Canyons National Conservation Area
CDOW	Colorado Division of Wildlife
COSO	Colorado State Office
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CWA	Clean Water Act
-D-	
DEIS	Draft Environmental Impact Statement
DOI	Department of the Interior
DPC	Desired Plant Community
DR	Decision Record
-E-	
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESI	Ecological Site Inventory
-F-	
FACA	Federal Advisory Committee Act
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FO	Field Office
FONSI	Finding of No Significant Impact
FR	Federal Register
FWS	Fish and Wildlife Service
FY	Fiscal Year
-G-H- I-	
GIS	Geographic Information System
HAZMAT	Hazardous Material
HCSWA	Horsethief Canyon State Wildlife Area
IBA	Important Bird Area
IBLA	Interior Board of Land Appeals
-J-K-L	

LAC	Limits of Acceptable Change
LE	Law Enforcement
LUP	Land Use Plan
LWCF	Land and Water Conservation Fund
	-M-
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
	-N-
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NPS	National Park Service
NRHP	National Register of Historic Places
-O-	
OHV	Off-Highway Vehicle
	-P- Q- R-
P&EC	Planning and Environmental Coordination
PFC	Proper Functioning Conditions
PL	Public Law
PM	Principal Meridian
RAC	Resource Advisory Council
RCRA	Resource Conservation & Recovery Act
RMP	Resource Management Plan
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
R/W	Right-of-Way (also ROW)
	-S-
SD	State Director
SHPO	State Historic Preservation Officer
SO	Sheriff's Office
SOP	Standard Operating Procedure
SRP	Special Recreation Permits
SSS	Special Status Species
	-T-
T&E	Threatened and Endangered
T&R	Township and Range
	-U-
USDA	U.S. Department of Agricultural
USDI (or DOI)	U.S. Department of the Interior
USFS	U.S. Forest Service (also FS)
-V-	
VRM	Visual Resource Management
	-W-
WO	Washington Office
WSA	Wilderness Study Area

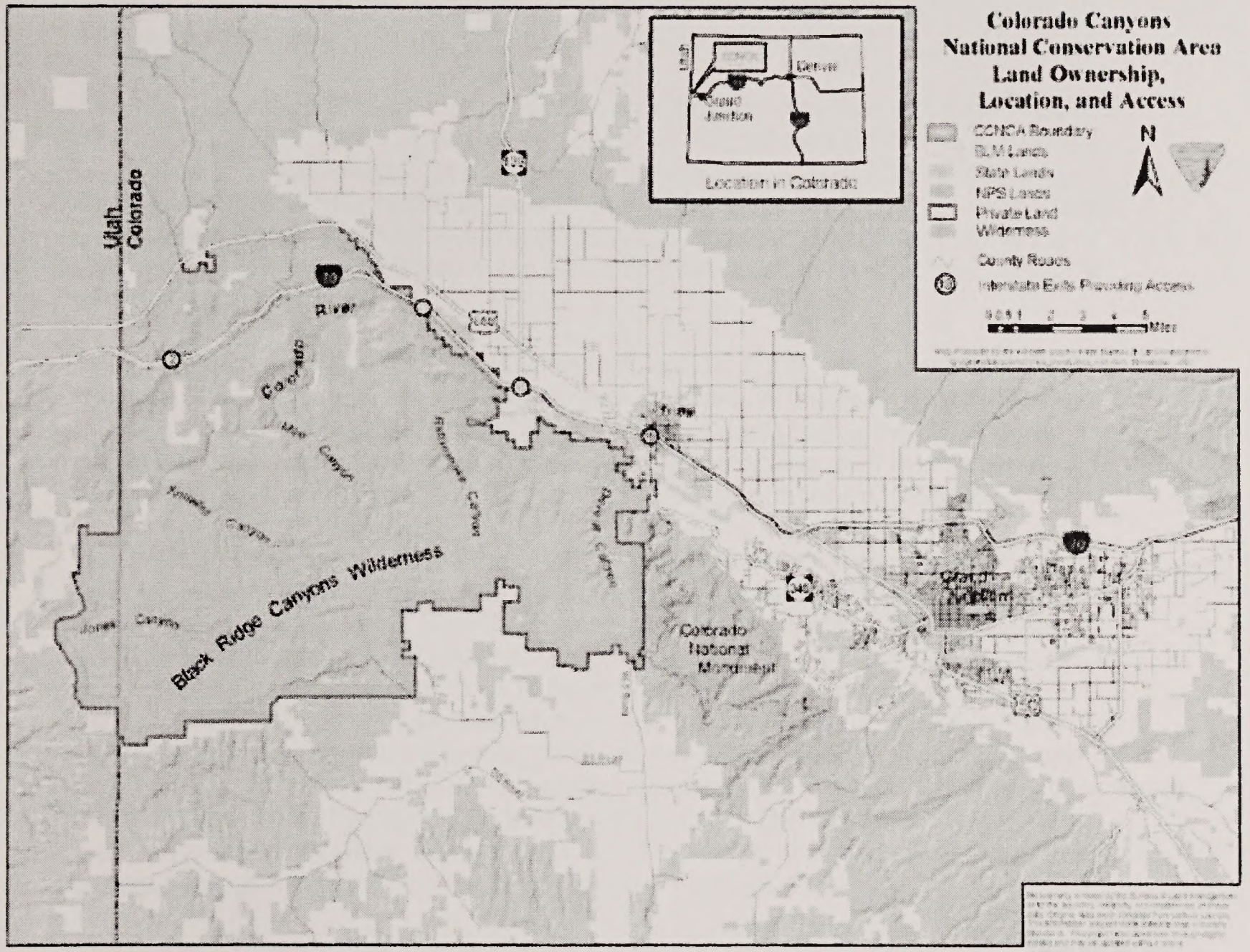
CHAPTER 1

RECORD OF DECISION



Horsethief Canyon, Colorado River

Figure 1-1
Colorado Canyons
National Conservation Area



CHAPTER 1 - RECORD OF DECISION

1.1 Summary

The 122,300-acre Colorado Canyons National Conservation Area (CCNCA), located west of Grand Junction, Colorado, is a collage of natural wonders featuring rugged sandstone canyons, natural arches, spires, and alcoves carved into the Colorado Plateau, through which runs a 24-mile stretch of the Colorado River. Included in the CCNCA are 75,550 acres of wilderness designated as the Black Ridge Canyons Wilderness (BRCW) with 5,200 acres extending into eastern Utah at the CCNCA's western boundary

The CCNCA was officially designated on October 24, 2000, when the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (the CCNCA Act) became Public Law 106-353. The act designating the CCNCA requires the Bureau of Land Management (BLM) to develop a comprehensive resource management plan (RMP) for the long-range protection and management of the CCNCA.

The CCNCA RMP incorporates the BLM core objective of multiple use, allowing for as wide a range of activity as possible, while protecting these spectacular resources for future use and enjoyment. This document also represents the collaboration and communication among local citizens; organizations; and local, state, and federal governments for over two years. A federally authorized advisory council was established to assist the BLM in developing and implementing the CCNCA RMP. The CCNCA Advisory Council comprises 10 members of the public representing various popular uses of the area. To further facilitate the planning process, working groups were formed based on four major geographic areas in the CCNCA – Mack Ridge, Rabbit Valley, the Colorado River Corridor, and the Wilderness. Each planning zone offers unique settings for recreation opportunities (see Figure 1-1).

The CCNCA offers a broad variety of resources and recreation opportunities resulting in users with diverse interests, including hiking, biking, float boating, off-highway vehicle (OHV) use, horseback riding, hunting, wildlife watching, backpacking, camping, and grazing resources; as well as world-renowned geological, paleontological and scientific sites.

The primary decision is to approve the CCNCA RMP. This Record of Decision (ROD) covers a variety of management actions that are considered to be implementation

decisions rather than land use planning decisions. Therefore, this decision has been separated into those actions which are land use planning decisions, which were protestable under the land use planning regulations (43 CFR 1610) and those actions which are implementation decisions, and are currently appealable under the Department of the Interior's appeal regulations (43 CFR 4).

1.2 Decision

The primary decision is to approve the attached CCNCA RMP.

What the Decision Will Provide

This ROD will provide overall direction for management of all resources on BLM-administered land in the planning area.

What the Decision Will Not Provide

Many decisions are not appropriate at this level of planning and will not be included in this ROD. Examples of these types of decisions include:

1) *Statutory requirements*. The decision will not change the BLM's responsibility to comply with applicable laws and regulations including the Clean Air Act, Clean Water Act, Endangered Species Act, National Environmental Policy Act, Federal Land Policy and Management Act (FLPMA), or any other federal law.

2) *National Policy*. The decision will not change BLM's obligation to conform with current or future national policy.

3) *Funding levels and allocations*. These are determined annually at the national level and are beyond the control of the field office.

Land Use Plan Decisions (LUP)

The decision is hereby made to approve the CCNCA RMP. This plan was prepared under the regulations implementing the FLPMA of 1976 (43 CFR Part 1600). An environmental impact statement was prepared for this RMP in compliance with the National Environmental Policy Act (NEPA) of 1969. The RMP is identical to the preferred Alternative 3 described in the Proposed CCNCA RMP and Final Environmental Impact Statement published in August 2004.

Land use plan decisions are identified in the attached RMP and include:

1) Goals, objectives, standards, and guidelines that define desired outcomes or future conditions.

2) Land use allocations.

3) Allowable uses and restrictions.

LUP decisions that will help achieve management goals and objectives, provide general management policy, describe desired future conditions and guide future actions.

A 30-day protest period was provided on the land use plan decisions contained in the *Proposed RMP/Final EIS* in accordance with 43 CFR Part 1610.5-2. No protests were received. This ROD serves as the final decision for the land use plan decisions described above and becomes effective on the date this ROD is signed. No further administrative remedies are available at this time for these land use plan decisions.

A decision is most likely a LUP decision if it guides future actions and subsequent decision-making and provides general management policy. LUP decisions are subject to protect to the BLM Director.

A decision is most likely an implementation decision if it represents BLM's final approval for a specific management action, activity, or use. These types of decisions require site-specific planning and NEPA analysis. Unlike LUP decisions, implementation decisions are not subject to protest under the planning regulations. Instead, implementation decisions are subject to various administrative remedies, primarily appeals to the Interior Board of Land Appeals (IBLA). Specific program regulations may describe other administrative review processes. In cases where implementation decisions are made as part of an RMP planning process, the implementation decisions are still subject to the appeals process or other administrative review as prescribed by program regulations since they are not part of the RMP and are not LUP decisions.

Continuity of Previous Decisions

Within the attached RMP are a number of valid, existing decisions that were previously made in other land use plans, plan amendments, and project or activity level plans which will remain in effect and continue to be implemented. These do not represent new decisions that are subject to protest or appeal. Administrative relief opportunities were provided previously when those decisions were made. These previous decisions are denoted by *(PD)* in Section 2.1, *Management Decisions*.

Implementation Decisions

It is the BLM's intent to implement, over time, a number of specific project level decisions described in the attached RMP, as funding and staff are available. These are called "implementation decisions" (as opposed to the land use planning decisions described above). Some decisions in the RMP will require the preparation of detailed, project-level NEPA analyses prior to implementation. Public involvement opportunities, including further protest or appeal opportunities, may be provided at that time. Other decisions have been addressed to a sufficient level of detail in the RMP/EIS process to be implemented over time without further NEPA. An appeal opportunity for these decisions is being provided at this time as described in the following section.

Appeal Procedures for Implementation Decisions

Implementation decisions are not subject to protest under the planning regulations but are subject to various administrative remedies, primarily appeals to the Interior Board of Land Appeals (IBLA) under 43 CFR 4.411. An appeal is an opportunity for a qualified party to obtain a review of a BLM decision by an independent board of Administrative judges within the Department of the Interior's Office of Hearings and Appeals. The IBLA determines whether the BLM followed applicable laws and regulations, adhered to established policies and procedures and considered relevant information in reaching an implementation decision.

To appeal an implementation decision from this plan, a notice must be filed with the IBLA. The request to appeal a decision (i.e. Notice of Appeal) must be received by the Grand Junction Field Office of the BLM within 30 days of the publication of the decision in the Federal Register. The notice of appeal must include a serial number or other identification of the case and may also include statement of the reasons for the appeal. If the Notice of Appeal does not include a statement of reasons, the statement must be filed with the IBLA within 30 days after the Notice of Appeal was filed. The statement of reasons should be mailed to:

Board of Land Appeals
Office of Hearings and Appeals
801 North Quincy Street
Arlington, VA 22203

Failure to file the statement of reasons within the time required will result in summary dismissal of the appeal.

Within 15 days after each document is filed, a copy of the notice of appeal must be served with the statement of reasons and any written arguments to:

Office of the Regional Solicitor
Rocky Mountain Region
U.S. Department of the Interior
755 Parfet Street, Suite 151
Lakewood, CO 80215

Service of the documents to the Solicitor must be accomplished through personal delivery, or by sending the document(s) by registered or certified mail, return receipt requested. Within 15 days of service of documents to the Solicitor, proof of that service must be provided to the IBLA at the address above.

Request for Stay

To file a motion for stay pending the outcome of an appeal of these implementation decisions, sufficient justification must be shown based on the following standards under 43 CFR 4.21:

1) The relative harm to the parties if the stay is granted or denied.

2) The likelihood of the appellant's success on the merits.

3) The likelihood of immediate and irreparable harm if the stay is not granted.

4) Whether the public interest favors granting the stay.

As noted above, the motion for stay must be filed in the office of the authorized officer.

1.3 Alternatives

Overview of the Alternatives

The four alternatives represented four directions that management of the CCNCA could take and remain consistent with the management objectives identified through the scoping process. Each alternative summarized below emphasized a different approach to the management of the area and incorporated a unique set of objectives.

Alternative 1— Continuation of Existing Management: This "No-Action Alternative" would maintain current management of the area as guided by the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (Public Law 106-353), the Ruby Canyon/Black Ridge Wilderness Integrated Management Plan (1998), the Grand Junction Resource Area Resource Management Plan, the Interim Management Policy for BLM National Monuments and National Conservation Areas, and the Colorado State Director's Guidance for the CCNCA. All actions associated with the Alternative 1 implement requirements of the above policy and guidance documents.

Alternative 2—Recreation Emphasis: This alternative emphasized maximizing multiple-use, recreation opportunities while conserving and protecting traditional uses and protecting natural resources to the maximum extent possible. Objectives of this alternative include preserving and enhancing traditional recreation activities such as hiking, camping, mountain biking, and backpacking, and maintaining current land health and improving priority areas of concern. Using a higher percentage of non-native species as necessary to stabilize soils is a possibility.

Alternative 3—Adaptive Management: As the BLM and CCNCA Advisory Council preferred alternative, this alternative's emphasis is on maintaining the current level of experience and enjoyment of the area's recreational opportunities and unique characteristics while recognizing that increased future use would trigger the need for

increased levels of management. Monitoring for land health and visitors' experiences would determine when adjustments to management would be required. Objectives for this alternative include preserving the character of the area and enhancing traditional recreation, while maintaining land health and improving priority areas of concern.

Alternative 4—Conservation Emphasis: This alternative emphasized maximizing the conservation of natural resources in the CCNCA while still maintaining traditional uses and recreational opportunities to the greatest extent possible. Objectives include improving land health in all areas of concern, preserving the character of the area, and expanding education and interpretation opportunities in all areas.

Environmental Preferability of the Alternatives

Environmental preferability is judged using the criteria in the National Environmental Policy Act (NEPA) and subsequent guidance by the Council on Environmental Quality (CEQ, 1981). The CEQ has defined the environmentally preferable alternative as the alternative that will promote the national environmental policy as expressed in Section 101 of the NEPA. This section lists six broad policy goals for all federal plans, programs, and policies:

1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

2) Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

3) Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

4) Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

5) Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on these criteria, identification of the most environmentally preferable alternative involves a balancing of current and potential resource uses with that of resource protection. None of the alternatives identified in the Draft RMP were determined to have the potential to result in significant adverse impacts or cause irretrievable damage to the resources. Resource management in Alternative 1 would not change from current policy. Alternative 2 offers the greatest potential for impacts to the human environment by providing for increased and enhanced recreational opportunities and user facilities. Alternative 4 would have the least potential for environmental impacts because it

proposes fewer surface-disturbing activities. Alternative 3 tends to provide a mix of impacts within the range of those found in Alternatives 2 and 4. However, none of the actions proposed in Alternatives 2, 3, or 4 would be considered significant in context or intensity. Taking no action would restrict and potentially prohibit the BLM from implementing management measures necessary for not only protecting the resource but also meeting the demands of increased recreation.

Alternative 3 would be less environmentally preferable than Alternative 4, but more preferable than Alternatives 1 or 2. This alternative would provide a balance between sustainable economic benefits and resource protection. Alternative 4 would be more protective than Alternatives 1, 2, or 3, but would allow fewer beneficial uses and cause a higher loss to the local economy than these three alternatives. Alternative 4 would reduce negative impacts from a variety of existing resource uses. Though it would be the least expensive alternative to implement, it would result in the highest economic loss to the local economy. Given the need to balance the six goals, the BLM finds that Alternative 3, the Adaptive Management Alternative, best meets the definition of the environmentally preferred alternative.

1.4 Management Considerations

Rationale for the Decision

Based on the input received during the planning process, there was both support and opposition to many components of the proposed plan. No formal comments were received from federal or state agencies, or tribal governments indicating the proposed plan was inconsistent with other existing plans or policies.

The BLM is tasked with the job of multiple use management, as mandated under the FLPMA and numerous other conflicting laws and regulations which govern the management of public lands. The proposed RMP (Alternative 3) provides a balance between those reasonable measures necessary to protect the existing resource values and the continued public need to make beneficial use of the planning area. Therefore, the implementation of the Proposed RMP is the alternative best able to comply with all applicable laws, regulations, policy, and agency direction.

1.5 Plan Monitoring

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring of resource management plans on a continual basis with a formal evaluation done at periodic intervals. Implementation of the CCNCA RMP will be monitored over time. Management actions arising from activity plan decisions will be evaluated to ensure consistency with RMP objectives.

A monitoring and implementation plan will be developed for the CCNCA through a similar public collaboration process as was done for the RMP planning process.

1.6 Mitigation Measures

Best Management Practices

Best Management Practices (BMPs) are methods, measures, or practices to prevent or reduce impacts from management actions, especially surface-disturbing activities which could result in short-term negative impacts to soil, air and water quality. BMPs can include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures. Usually BMP's are applied as a system of practices rather than a single practice. BMPs will be selected on the basis of site-specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility.

Standard Operating Procedures

Standard Operating Procedure (SOP) was developed for the CCNCA RMP and provides a framework for the accomplishment of administrative actions developed within the RMP. SOP incorporates the BLM core objective of multiple use, allowing for as wide a range of activity as possible while protecting the resources for future use and enjoyment. All SOP are based on existing laws, regulations, and BLM policy and guidance. The detailed SOP for the CCNCA is found in Appendix 2. The following issues are addressed in the SOP:

- Allowable Uses
- Coordination with other agencies, state and local governments, and Indian Tribes
- Air Quality
- Hazardous Materials
- Barrier-Free Access
- Land Acquisition
- Utility/Rights-of-Way (ROW), Exclusion and Avoidance, Unauthorized Use
- Vegetation Management
- Weed Management
- Wildlife
- Threatened, Endangered and Sensitive Species Habitat
- Soil and Water Resources
- Recreation
- Visual Resources
- Wilderness Resources
- Cultural Resources
- Paleontological Resources
- Cadastral Survey
- Site-Specific Project Plans
- Economic and Social Considerations
- Environmental Review

Public Involvement in the Planning Process

The planning process for the RMP began on December 12, 2001, with publication of the Notice of Intent in the Federal Register. The BLM met with the public over 130 times in 18 months. This document represents collaboration and communication among local citizens; organizations; and local, state, and federal governments throughout the past two years. A federally-authorized advisory council was established to assist the BLM in developing and implementing the CCNCA PRMP. The CCNCA Advisory Council comprises 10 members of the public representing various popular uses of the area. The BLM worked extensively with citizen-based working groups that could effectively support the planning process. This planning program also included project newsletters, field trips, numerous presentations and media spots, publishing a project web site (www.co.blm.gov/cocanplan), issuing press releases, and holding public open houses in both Grand Junction and Fruita.

During this planning process, each working group identified specific planning issues for each of the four planning zones within the CCNCA. Management recommendations were then developed by those groups, reviewed by the BLM Interdisciplinary Team of resource experts, and presented to the advisory council for discussion and revision or approval. User groups in each of the four planning zones shared core concerns; namely those of educating and informing users, encouraging cooperation among a diverse recreating public, and adequately providing for multiple use while protecting the resource. This RMP incorporates extensive input from the public as well as the BLM core objective of multiple-use, allowing for as wide a range of activity as possible, while conserving the spectacular resources of the CCNCA for future use and enjoyment. A complete list of public collaboration efforts is detailed in Chapter 5 of the CCNCA RMP.

Analysis of the Management Situation

A Management Situation Analysis (MSA) was prepared and a report prepared in late 2002, providing a thorough summary of existing resources and current management for those resource sectors of the planning area. The core sections of the MSA address resource area profiles and existing management situations.

Draft RMP/EIS

The Draft RMP/EIS was released on October 17, 2003 and remained open for public comment until January 31, 2004. The BLM distributed a postcard notification and inquiry via first-class mail to approximately 450 contacts on the CCNCA mailing list, announcing the availability of the draft RMP/EIS in various media formats. The CCNCA mailing list includes federal, state, and local elected officials, federally recognized tribes, property owners in and near the CCNCA, individuals, special interest groups, and organizations. Availability of the draft RMP/EIS was also announced by publishing notices in local newspapers and the *Federal Register*, as well as on the project web site (www.co.blm.gov/cocanplan). The Citizen Advisory Council and working groups, composed of approximately 120 individuals, were notified by e-mail of the publication of the draft RMP/EIS.

The draft RMP/EIS was provided for public review by bound paper or CD-ROM format upon request, and posted for review or downloading on the project web site. Copies were also available for review at local community libraries.

Along with the monthly advisory council meetings which are open to the public, open houses were held in January 2004, during the 90-day public comment period.

The following table (Table 1-2) summarizes the comments submissions to the BLM. A total of 87 public comments were received by letter, fax and internet response. Most submissions contained more than one comment resulting in a total of 373 comments received on the CCNCA DRMP. Table 1-3 summarizes the major issues addressed in the public comments.

Table 1-2
Summary of Comment Submissions

TOTAL SUBMISSIONS	AGENCY SUBMISSIONS -National Park Service – Colorado National Monument -US Fish and Wildlife Service -City of Fruita -Mesa County Land Trust -National Trust For Historic Preservation -SO -US Environmental Protection Agency	7
	INTEREST GROUP SUBMISSIONS -CO Plateau Mountain Bike Assoc -International Mountain Bike Assoc -Motorcycle Trail Riding Assoc -Combined Environmental (CEC et al) -Personal Watercraft Industry Assoc -ConservAmerica	6
87	INDIVIDUAL SUBMISSIONS (Unique) -Alternative 1 1 -Alternative 2 2 -Alternative 3 9 -Alternative 4 8 -Misc 10	28
	ACTION ALERT-BASED SUBMISSIONS (all in favor of Alternative 4) -Minimal to no variation 36 -Some variation 10	46

Table 1-3 Public Comment Issue Summary			
MAJOR ISSUE	SUB-ISSUE		TOTAL
River management			57
	*Ban jet skis and >5 hp motors	39	
	Miscellaneous	18	
Livestock Grazing			115
	(From 41 form letter points to make)		
	*Do not reallocate relinquished/canceled permits	32	
	*Prohibit grazing in tributaries	20	
	* 2 yr. Land Health Assessment	23	
	*Sheep grazing (all oppose; form letter)	35	
	From non-form letters - miscellaneous	5	
Trails			38
	*Oppose trails w/o Site-Specific analysis	38	
Travel Management			108
	*Close Access w/n 2 mi to Rattlesnake Arches	31	
	Gating in Mack Ridge	10	
	Mountain Bike	19	
	Equestrian	7	
	Other	20	
	All trails	9	
	OHV	12	
Public Education			2
Urban Interface			3
Cultural/Paleo Resources			4
Natural Resource Protection			34
	Wilderness protection	13	
	Resource improvement	1	
	Wildlife issues	7	
	Misc	13	
More info on maps			3
Target Shooting			5
Segregation of uses			4
Events/ Use/Permits			12
Facility Improvement			6
Camping			7
TOTAL COMMENTS			373
*Asterisked comments derived from 46 “form letter” submissions			

Proposed RMP/Final EIS

A 30-day protest period was provided on the *Proposed RMP/Final EIS* from August 6, 2004 until September 7, 2004, in accordance with 43 CFR Part 1610.5-2. No protests were received.

Biological Assessment for US Fish & Wildlife Service Review

In the spring of 2003 the BLM began informal consultation with the U.S. Fish and Wildlife Service (USFWS) concerning the CCNCA/RMP. Preparing a Biological Assessment (BA) is a step in the ESA Section 7 consultation process. A BA was drafted and delivered to the USFWS for preliminary review. Their review resulted in the determination that if Alternative 3 remained the preferred alternative and did not materially change from its form at that time, and no new relevant information changed the situation, no formal consultation would be needed (letter dated May 20, 2003). The USFWS recommended a half-mile activity restriction around bald eagle nests between November 15 and July 30. They indicated the southwestern willow flycatcher could be dropped from analysis on the account of Endangered Species Act (ESA). The USFWS provided the contacts and information helpful in streamlining reviews under the ESA.

RMP Implementation

Public involvement in plan implementation decisions is discussed in the "Implementation Decisions" section on page 2. In addition, the CCNCA may develop an implementation strategy or "business plan", that would allow further opportunities for public involvement in determining what portions of the CCNCA RMP should be highest priority for future implementation. Public involvement, in coordination with the CCNCA Advisory Council, will be a key factor in developing the business plan. Further details may become available in the near future.

CHAPTER 2

COLORADO CANYONS NATIONAL CONSERVATION AREA
RESOURCE MANAGEMENT PLAN

COLLARED LIZARD IN RABBIT VALLEY

CHAPTER 2—RESOURCE MANAGEMENT PLAN

2.1 Introduction

The Colorado Canyons National Conservation Area (CCNCA) was officially designated on October 24, 2000, when the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (the CCNCA Act) became Public Law 106-353. The Act designating the CCNCA requires the Bureau of Land Management (BLM) to develop a comprehensive Resource Management Plan (RMP) for the long-range protection and management of the CCNCA. This RMP incorporates the BLM core objective of multiple use, allowing for as wide a range of activity as possible, while protecting these spectacular resources for future use and enjoyment. This document, which took over two years to produce, was done in collaboration with our cooperating agency partners, In addition, local citizens; organizations; local and state governments, and other federal agencies worked steadily with us to produce a resource management plan that addresses intergovernmental issues and is consistent with the Bureau's mission and policies.
A federally authorized Advisory Council was established to assist the BLM in developing and implementing the CCNCA RMP. The CCNCA Advisory Council comprises ten members of the public representing various popular uses of the area. To further facilitate the planning process, Working Groups were formed based on four major geographic areas in the CCNCA – Mack Ridge, Rabbit Valley, the Colorado River Corridor, and the Wilderness. Each planning zone offers unique settings for recreation opportunities (see Figure 2-1).

2.1.1 Purpose of and Need for Action

The need for the CCNCA Resource Management Plan is to fulfill the requirement of The CCNCA Act to develop a comprehensive management plan for the long range protection of the special and unique values of the public lands making up the CCNCA, including the Black Ridge Canyons, Ruby Canyon, and Rabbit Valley.

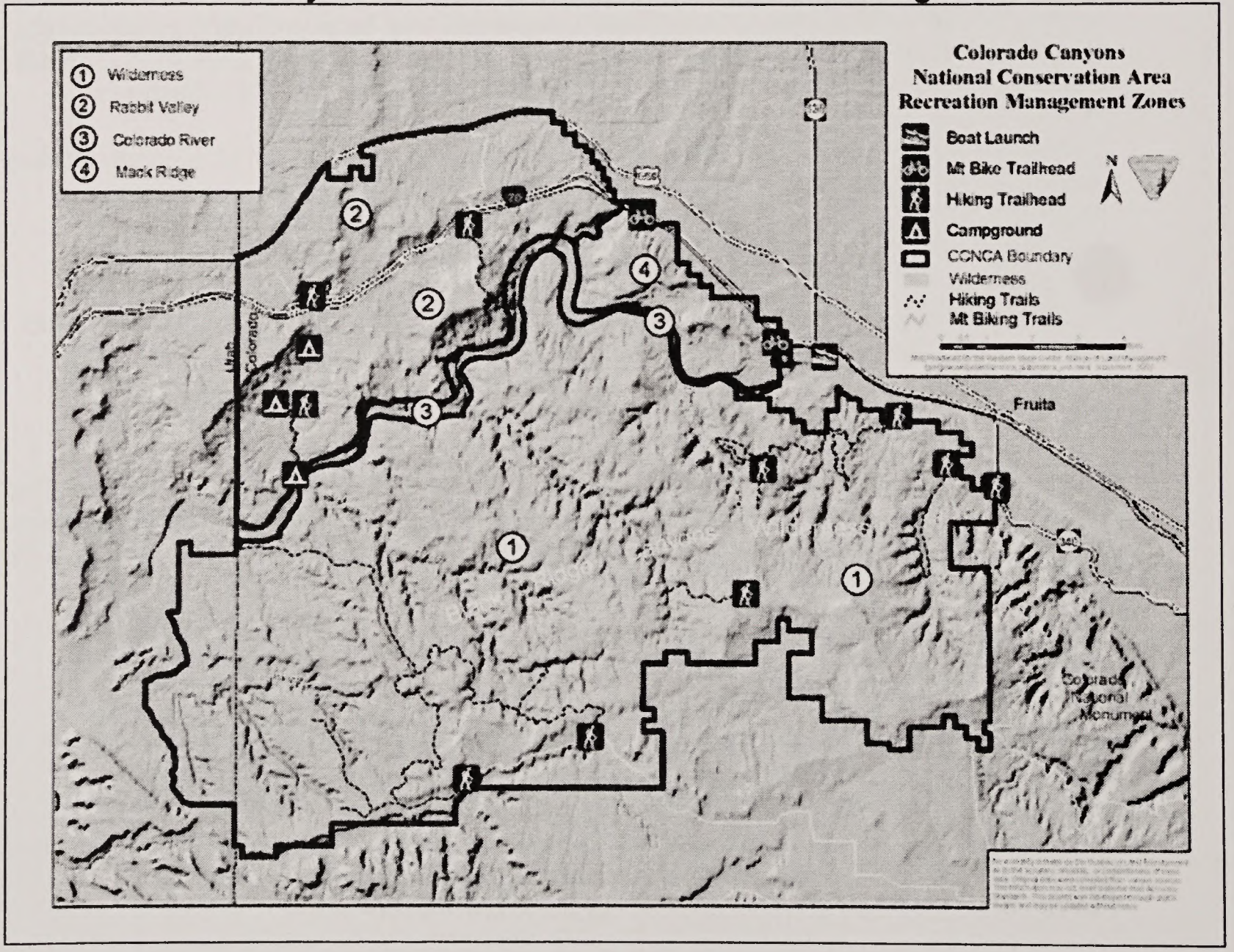
The purpose of the RMP is to develop a public document that defines management policies and will guide management of the CCNCA for the next 10-15 years.
The RMP specifies goals and objectives for the management of future use, defines recreation management updates the existing management policies for public lands in the NCA and the resource allocations affecting the NCA; incorporates available new data; resolves issues identified during public scoping; and integrates or modifies uses of public land that have occurred since the Ruby Canyon/Black Ridge Plan was completed. In addition, the RMP provides public land management measures in accordance with the FLPMA and BLM's Land Use Planning Handbook, H-1610-1.

2.1.2 Description and Map of the Planning Area

The 122,300-acre CCNCA, located west of Grand Junction, Colorado, is a collage of natural wonders featuring rugged sandstone canyons, natural arches, spires, and alcoves carved into the Colorado Plateau, through which runs a 24-mile stretch of the Colorado River. Included in the CCNCA are 75,550 acres of Wilderness designated as the Black Ridge Canyons Wilderness (BRCW) with 5,200 acres extending into eastern Utah at the CCNCA's western boundary.

The CCNCA offers a broad variety of resources and recreation opportunities resulting in users with diverse interests, including hiking, biking, float boating, off-highway vehicle (OHV) use, horseback riding, hunting, wildlife watching, backpacking, camping, and grazing resources; as well as world-renowned geological, paleontological and scientific sites.

Figure 2-1
Colorado Canyons National Conservation Area Planning Zones



The four planning zones, as mentioned above, and their typical activities are:

Table 2-1
CCNCA Planning Zones and Primary Activities

Mack Ridge Zone	Mountain bike riding and horseback riding
Rabbit Valley Zone	Off-highway vehicle (OHV) riding, hiking, Native American rock art viewing, camping, wildlife watching, mountain bike riding, horseback riding, and grazing
Wilderness Zone	Hiking, backpacking, horseback riding, grazing, and hunting
River Corridor Zone	Boating, hiking, and camping

2.1.3 Planning Issues Developed During Scoping

A planning issue is defined as a matter of controversy, dispute, or general concern over resource management activities, the environment, or land uses. While planning issues drive the RMP, many other basic environmental and management issues are also addressed to provide comprehensive management guidance for all resources and to satisfy legal requirements.

In this planning process, each Working Group identified planning issues specific to each of the four planning zones within the CCNCA. Management recommendations were then developed by those groups, reviewed by the BLM interdisciplinary team of resource experts, and presented to the Advisory Council. The Advisory Council discussed these issues and, based on public input and the discussions, made recommendations to the CCNCA. Listed below are some of the identified issues that were identified through the scoping process and addressed in the CCNCA RMP:

- Will land parcels bordering the CCNCA be acquired?
- What type of education, information, and interpretation will be provided to visitors?
- Will group-use areas for picnics, camping, and events be provided?
- How will designated and dispersed camping be addressed?
- Will private inholdings be acquired and what uses will be allowed on them if they are?
- How will critical wildlife habitat areas be managed?
- Will requirements for fire pans and human waste disposal systems remain or become more comprehensive?
- How will noxious weeds, especially tamarisk, be controlled?

- Will a monitoring plan be developed to identify significant deterioration of natural resources?
- When and where can a permit/fee system be expected?
- Will group sizes be restricted?
- How can management actions be enforced?
- How will access to the Wilderness be maintained?
- How will urban/Wilderness interface issues be managed?

2.1.4 Planning Criteria

Planning criteria identify the legal, policy, and regulatory constraints that direct the BLM or limit the agency's ability to resolve issues. Planning criteria are based on standards prescribed by applicable law and regulations, agency guidance, information pertinent to the planning area, as well as coordination with other government agencies and the public. These criteria guide the BLM in developing management alternatives for the CCNCA and include the following:

- The RMP is a comprehensive management plan for the long-range protection and management of the CCNCA and BRCW.
- The RMP reflects the legislative intent to conserve, protect, and enhance the area to benefit current and future generations and the unique and nationally important values of the land.
- The RMP complies with the Federal Land Policy and Management Act (FLPMA) of 1976 and all other applicable laws. It meets the requirements of Public Law 106-353, designating the CCNCA, to protect its natural resources and outstanding recreation opportunities.
- The planning process includes an Environmental Impact Statement (EIS) that will comply with the standards of the National Environmental Policy Act (NEPA) of 1969.
- The planning process involves the local community and recognizes the results of previous collaborative planning efforts, most notably the Ruby Canyon/Black Ridge Integrated Resource Management Plan.
- To enhance community involvement in the planning process, an Advisory Council has been established to advise the BLM on RMP development and implementation.
- The planning process involves consultation with Native American tribes and provides strategies for protecting recognized traditional uses and areas of cultural and religious significance.
- The RMP considers the geological, cultural, paleontological, natural, scientific, recreational, environmental, biological, wilderness, wildlife education, and scenic resources, allowing establishment of interpretive sites or facilities designed to protect these resources.
- The RMP sets in place management goals and objectives for the 75,550 acres designated as the BRCW, as a component of the National Wilderness Preservation System and in accordance with the Wilderness Act of 1964.
- The RMP recognizes that neither the CCNCA nor the Wilderness shall include any part of the Colorado River.

- The RMP establishes travel management goals and actions to allow motorized vehicle use only on roads and trails designated for motorized use; no cross-country, motorized travel is allowed.
- The RMP allows continued management of grazing leases and permits in accordance with current BLM policy and with the Wilderness Act.
- The RMP recognizes the Colorado Division of Wildlife's (CDOW) responsibility to manage wildlife on BLM-managed lands. The BLM consults with CDOW in establishing policy for the purposes of protecting public safety, administration, and public use and enjoyment.
- The RMP provides for continued management of the utility corridor, Black Ridge Communication Site, and Federal Aviation Administration Site.
- It has been recognized, throughout the planning process, that recommended actions cannot effectively establish buffer zones adjacent to the CCNCA boundary.
- The RMP encourages the acquisition of private inholdings within the CCNCA and Wilderness, while continuing to allow reasonable access to private landowners.
- Decisions in the RMP strive to comply with existing plans and policies of adjacent local, state, and federal agencies, as long as the decisions conform to the CCNCA legislation, other laws and regulations, and other applicable legal or regulatory guidance.
- Known cultural resources are assigned to use allocations with associated management goals and prescriptions to achieve these goals.

2.1.5 Planning Process

Management of the area has most recently been guided by the Ruby Canyon/Black Ridge Integrated Resource Management Plan (1998) and the CCNCA Act. Additional guidance has been provided by the Grand Junction Resource Management Plan (1987), the Grand (UT) Resource Area Management Plan (1985) addressing the Utah portion of the CCNCA), and several other activity-level management plans covering recreation, wildlife, grazing, and watershed management. All of these plans have provided a basis for the development of the new CCNCA RMP, which will supercede all previous plans upon finalization and release.

The planning process for the RMP began on December 12, 2001, with publication of the Notice of Intent in the Federal Register. The BLM met with the public over 130 times in 18 months. This document represents collaboration and communication among local citizens; organizations; and local, state, and federal governments throughout the past two years. A federally authorized Advisory Council was established to assist the BLM in developing and implementing the CCNCA PRMP. The CCNCA Advisory Council comprises ten members of the public representing various popular uses of the area. The BLM worked extensively with citizen-based Working Groups that could effectively support the planning process. This planning program also included project newsletters, field trips, numerous presentations and media spots, publishing a project web site (www.co.blm.gov/cocanplan), issuing press releases, and holding public open houses in both Grand Junction and Fruita.

Following the initial phase of public scoping, the draft RMP/EIS was made available to the public for a 90-day comment period from October 17, 2003 until January 30, 2004. The NOA for the proposed RMP/Final EIS was published by the BLM in the Federal Register July 30, 2004 and the formal publication date for the CCNCA RMP came when the EPA issued the NOA for the Final EIS on August 6, 2004. The 39 day protest period for the proposed RMP ended on September 7, 2004. No formal protests were received and this document represents the approved Resource Management Plan for the Colorado Canyons National Conservation Area.

Collaboration

A community-based planning process was used to gather public input and address resource issues. Consultation with all interested Native American tribes was initiated early in the process. The BLM met with both the Southern Ute and Northern Ute Indian Tribes and continues to work closely with the Colorado National Monument (National Park Service), the Bureau of Reclamation, Colorado Department of Natural Resources, Colorado Division of Wildlife, U.S. Geological Survey, the U.S. Fish and Wildlife Service, the city of Fruita, Mesa County, Colorado, and the BLM Moab Field Office (Utah). The BLM has also consulted and coordinated planning activities with federal, state, county, and local government elected officials and representatives. Communication is ongoing and will continue through the finalization of this plan and beyond to its implementation.

On August 8, 2002 the BLM entered into Cooperating Agency status with the Colorado Department of Natural Resources. Benefits resulting from the cooperating agency agreement include:

- Sharing and disclosing relevant information early in the analytical process.
- Applying available technical expertise and staff support.
- Avoiding duplication with State procedures.
- Establishing a mechanism for addressing intergovernmental issues.
- Building a common understanding and appreciation for various governmental roles in the NEPA process, as well as helping to assure successful completion and adoption of environmental documents.

Both the Colorado National Monument and the City of Fruita are engaged in planning efforts and have worked closely with the CCNCA management and planning staff to ensure that common goals are addressed in all plans. Linked trails and cooperative management of neighboring locations are examples of how actions can be implemented to minimize surface disturbance and resource impacts from redundant trail systems.

2.1.6 Related Plans

Many agencies in the Grand Valley have recently undertaken, or completed, planning efforts. Agencies with land-use or resource management planning efforts in the local area include:

Mesa County
-Mesa County Master Plan

-Fruita/Mesa County Greenway Business Park Plan
-Loma/Mack Rural Communities Plan
-Redlands Plan

Fruita
-Fruita Community Plan 2020
-Highway 340 Corridor Plan
-Redlands Area Transportation Study
-Fruita/Mesa County Greenway Business Park Plan

Grand Junction
-City of Grand Junction Strategic Plan 2002-2012
-The Grand Valley Community Vision for the Year 2020

National Park Service
-Colorado National Monument General Management Plan

United States Forest Service
-Grand Mesa Travel Plan
-Grand Mesa, Uncompahgre, Gunnison Land and Resource Management Plan

BLM
-Billings Canyon Environmental Assessment
-Bangs Canyon Recreation Area Management Plan
-North Fruita Desert Recreation Area Management Plan
-Gunnison Gorge National Conservation Area Resource Management Plan And Environmental Impact Statement (Uncompahgre Field Office – Montrose)
-Roan Plateau Resource Management Plan – Glenwood Springs Field Office

On a regional scale, the local planning area is considered to be Mesa County and includes the Colorado National Monument; Grand Mesa National Forest; and the cities of Grand Junction, Fruita, Palisade, Loma, and Mack. Throughout the planning process these agencies and municipalities have been involved in helping the BLM develop a vision for the management of the CCNCA. The goals and objectives of the plans listed above, for each of these agencies, are consistent with the goals and objectives of the CCNCA RMP; to preserve the unique resources of the area and to protect the amenities that the area offers its local population as well as those uses drawing visitors worldwide.

2.1.7 Policy and Legislative Constraints

The CCNCA enabling legislation (The Act) specifically states that the land within the CCNCA is withdrawn from entry, appropriation, patent, or disposal under any public land laws, mining laws, and mineral/geothermal leasing laws. Activities in the Black Ridge Canyons are to be managed in accordance with the Wilderness Act. The Black Ridge Canyons area has been managed as a Wilderness Study Area (WSA) for many years, and the Wilderness designation will have little impact on most current activities. Valid

existing rights, including grazing allotments, will continue to be recognized. In addition, associated rights of access will be allowed in the same scope and frequency as before the Wilderness designation. The Wilderness Act does not allow for roads (permanent or temporary); use of motor vehicles or boats, or any form of mechanical transport; use of motorized equipment; landing of aircraft; facilities, structures, or installations; or commercial enterprise within a Wilderness area. Historical use, authorized access by grazing permittees, wildlife management agencies, and, in emergency situations, fire or rescue operations may prompt cases of permitted, nonconforming use.

The legislation also included specific directives for some activities in the CCNCA:

> *"Off-Highway Vehicle Use...shall be allowed only on roads and trails designated for use of motor vehicles in the management plan...*
>
> *Hunting, Trapping, and Fishing...shall be allowed within the Conservation Area and the Wilderness in accordance with applicable laws and regulations of the United States and the States of Colorado and Utah.*
>
> *Grazing...the Secretary shall issue and administer any grazing leases or permits in the Conservation Area and the Wilderness in accordance with the same laws (including regulations) and Executive orders followed by the Secretary in issuing and administering grazing leases and permits on other land under the jurisdiction of the Bureau of Land Management."*

The Act included requirements for the RMP as follows:

> *"The management plan shall... (A) describe the appropriate uses and management of the Conservation Area and the Wilderness; (B) take into consideration any information developed in studies of the land within the Conservation Area or the Wilderness; (C) provide for the continued management of the utility corridor, Black Ridge Communications Site, and the Federal Aviation Administration Site as such for the land designated on the Map as utility corridor, Black Ridge Communications Site, and the Federal Aviation Administration Site; (D) take into consideration the historical involvement of the local community in the interpretation and protection of the resources of the Conservation Area and the Wilderness, as well as the Ruby Canyon/Black Ridge Integrated Resource Management Plan, dated March 1998, which was the result of collaborative efforts on the part of the Bureau of Land Management and the local community..."*

The Act also states that *"Neither the Conservation Area nor the Wilderness shall include any part of the Colorado River to the 100-year high water mark."* This eliminates the Colorado River itself from the CCNCA but does not preclude BLM management of river access and river corridor issues.

Overall Vision

The purpose of the Colorado Canyons National Conservation Area Resource Management Plan is to provide an adaptive framework for the conservation, protection, and enhancement, for the benefit and enjoyment of both present and future generations, the nationally important values of the public lands making up the 122,300 acres of the CCNCA, including the 75,550-acre Black Ridge Canyons Wilderness.

2.2 Management Decisions

Through more than 100 community-based meetings and planning activities scheduled over a 14-month period, the following management goals and objectives were formulated to guide management of the CCNCA for the next 10 to 15 years.

Management Goals

- Preserve and protect the nationally significant area for the enjoyment of present and future generations.

- Adaptively manage the CCNCA to maintain the current level of enjoyment of the area's recreational opportunities and unique characteristics while recognizing that increased future use will trigger the need for increased levels of management.

- Manage a diversity of physical, social and administrative settings to facilitate

- Monitor for land health and visitors' beneficial experience to determine when increased levels of management are required.

Management Objectives

- Preserve the character of the CCNCA.

- Preserve and enhance traditional recreation activities–hiking, camping, mountain biking, OHV use, horseback riding, hunting, and boating.

- Maintain land health and improve priority areas of concern.

- Maintain and manage grazing for sustainability and conservation in accordance with land health guidelines and standards for rangeland health.

- Plan effective travel management while allowing motorized vehicle use only on roads and trails designated for motorized use.

- Expand education and interpretation opportunities in all areas.

2.3 Management Actions

Most of the actions listed in this section represent a public consensus on desired future conditions reached through extensive collaboration during the planning process. Some are land use plan (LUP) decisions, some are activity-level decisions (implementation decisions). In the following description, implementation decisions are denoted by an ***(I)***. All other decisions are LUP decisions.

A decision is most likely an implementation decision if it represents BLM's final approval for a specific management action, activity, or use. These types of decisions require site-specific planning and NEPA analysis. Unlike LUP decisions, implementation decisions are not subject to protest under the planning regulations. Instead, implementation decisions are subject to various administrative remedies, primarily appeals to the Interior Board of Land Appeals (IBLA). Specific program regulations may describe other administrative review processes. In cases where implementation decisions are made as part of an RMP planning process, the implementation decisions are still subject to the appeals process or other administrative review as prescribed by program regulations since they are not part of the RMP and are not LUP decisions.

It is important to note that, for each of these actions that follow, site-specific analysis will be necessary to determine if further analysis required by NEPA is necessary for any on-the-ground activity prior to any irretrievable commitment of resources or ground disturbing activity. In addition, the implementation of all actions is subject to available resources and budget constraints.

Lands and Rights-of-Way

The BLM will continue to acquire, from willing sellers, private in-holdings within the CCNCA boundaries as well as along the boundaries.

Rights-of-Way (ROW) proposals will be reviewed and approved on a case-by-case basis and will be subject to constraints, sensitive resource areas, and issues identified in the CCNCA plan and other applicable documents and policies.

Utility line proposals, from within the Interstate 70 (I-70) corridor to the Colorado River or in the upper Black Ridge road area, will be required to be located underground and along the edge of or within roadways, or within the railroad right-of-way. Additions or modifications to aboveground utilities will only be considered within the existing utility corridors where aboveground facilities presently exist. Underground utility proposals will also be considered in these existing corridors. ROWs will be excluded from the Black Ridge Canyons Wilderness (BRCW) area.

All roads administered by the BLM will be maintained in their current condition, and no improvement will be permitted through ROW authorizations. Any new roads that could be authorized will be constructed to minimal widths and standards similar to nearby existing "jeep roads." Any such new roads could also be gated to prevent, or limit, public vehicle access.

Additional communication towers at the existing Rabbit Valley Communication Site will be considered if the proposed use was located within 250 feet (ft) of the existing cellular telephone tower, involved a minimal and unlighted tower structure (1.5 ft lattice with wand at top, under 60 ft in height), and was not obvious to a casual observer from the I-70 corridor. Minor additions or modifications of other existing communication sites

(excluding the Black Ridge Site, which has an approved management plan that is consistent with CCNCA objections) will also be considered. In all cases, collocation on existing facilities is preferred. No additional communication sites will be considered at other areas. The BLM reserves the right to develop minor communication facilities for administrative purposes.

I-70 and railroad maintenance or emergency repair will be coordinated with the BLM and actions taken to reasonably protect resource values. The BLM may also request the Federal Aviation Administration (FAA) to consider removing the requirement for the strobe light on the Upper Black Ridge Railroad Communication Site.

Mesa County and BLM staff will coordinate maintenance activities on Mesa County roads. In response to potential development on private inholdings, the BLM may request Mesa County consideration of land use permitting restrictions on private inholdings for protecting the overall landscape and land use character. Requested restrictions could include limiting land uses or subdivision of property, limiting any development to a portion of the private land, locating and designing developments to minimize adverse impacts to the landscape, limiting use of exterior lights, or providing for limited public access.

Geology and Topography

The BLM will identify important geologic features for possible special management consideration while preserving and protecting the geologic resources.

Soils

The BLM will adhere to Best Management Plan (BMP) and exercise careful placement of proposed trails and facilities. To encourage the protection of soils, activities such as recreation, access and travel routes, and grazing will be managed to minimize erosion, salinity and selenium yields, and compaction. A strong emphasis on minimum impact techniques, through CCNCA visitor education, will be extremely important if protection and conservation of the soil resource for future generations is to be realized.

Minerals and Energy Resources

As specified in the CCNCA enabling legislation (P.L. 106-353), subject to valid existing rights, all federal land within the CCNCA and the BRCW, and all land and interests in land acquired for the Conservation Area or the Wilderness by the United States are withdrawn from:

1) all forms of entry, appropriation, or disposal under the public land laws;
2) location, entry, and patent under the mining laws; and
3) the operation of the mineral leasing, mineral materials, and geothermal leasing laws, and all amendments thereto.

Water Resources

Surface Water

The BLM will manage all activity within the CCNCA to ensure that water quality standards are met, or exceeded, using BLM Land Health Standards (Appendix 1, Standard 5–Water Quality) as the water quality indicator.

All water sources, including both surface water and ground water sources, will be inventoried to determine exact location, flow rates/volumes, types of beneficial uses of water at the location, type of water development, condition of water development, and any sensitive species dependent on the water source.

The recreation, range management, and wildlife programs will identify the location and type of any water shortages that prevent them from meeting management objectives.

BLM will acquire water rights on all water sources within the CCNCA and Wilderness that BLM uses to meet management objectives. Water rights will be sought for livestock, wildlife, and recreation on all water sources that support those uses.

The authorizing legislation specifies that when BLM acquires water rights, BLM will follow the procedural and substantive provisions of Colorado water law.

Any activity in the CCNCA and BRCW will incorporate mitigation into management actions to protect water resources. Measures designed to minimize erosion and water quality deterioration will continue to be required in site-specific plans for any activity requiring surface disturbance in the CCNCA. Measures to minimize erosion and water quality affects will be further analyzed in environmental assessments for any surface disturbing activities in the CCNCA per requirements under the National Environmental Policy Act (NEPA).

The BLM will work with the Grand Valley Selenium Task Force to address elevated selenium levels in Salt Creek and other entities to minimize sediment and salinity production within the CCNCA.

Ground Water

The BLM will continue to manage to preserve and protect ground water resources, including springs, and will pursue completion of an inventory of springs. Inventoried springs in the CCNCA will not be developed but will continue to be used by hikers and wildlife, as well as to sustain associated riparian areas. The BLM will continue to utilize existing water wells for stock watering purposes.

All water sources, including both surface water and ground water sources, will be inventoried to determine exact location, flow rates/volumes, types of beneficial uses of water at the location, type of water development, condition of water development, and any sensitive species dependent on the water source.

The recreation, range management, and wildlife programs will identify the location and type of any water shortages that prevent them from meeting management objectives.

BLM will acquire water rights on all water sources within the CCNCA and Wilderness that BLM uses to meet management objectives. Water rights will be sought for livestock, wildlife, and recreation on all water sources that support those uses.

The authorizing legislation specifies that when BLM acquires water rights, BLM will follow the procedural and substantive provisions of Colorado water law.

Climate and Air Quality

Activities and projects on BLM-managed lands will comply with applicable local, state, and federal air quality regulations. National Ambient Air Quality Standards will be met, or exceeded, for all activity occurring in the CCNCA. Mitigation to minimize air quality degradation will be incorporated into project proposals as appropriate.

Noise

Public lands will be managed in accordance with Colorado NS 25-12-106.

Vegetation

The BLM will attain, or maintain, DPC objectives determined in the Ruby Canyon/Black Ridge Integrated RMP and will maintain existing areas meeting land health standards (see Appendix 8). Vegetation restoration and reclamation projects will be implemented on those areas currently not meeting land health standards, in concert with other programs that will improve the land health on all priority areas, including the River Corridor, Rabbit Valley, Black Ridge, as well as on other sites that will benefit from treatment for various resources such as sage grouse, desert bighorn, and prairie dogs.

Special emphasis will be given to proper placement of roads and trails, along with rehabilitation and stabilization of existing roads and trails. Emphasis will also be placed on improving plant diversity, particularly in those areas dominated by cheatgrass or crested wheat grass, and in other priority areas. Reclamation and restoration could include the use of non-native plants and chemical treatment.

Vegetation–Weed Management

The BLM will manage noxious weeds using an Integrated Weed Management (IWM) approach, while incorporating weed education information into CCNCA literature, web sites, and key entry points into the CCNCA. The BLM's Partners Against Weeds (PAWs) action plan is a comprehensive strategy providing guidance for preventing and controlling the spread of noxious weeds. Goals of the PAWs plan are prevention and detection, education and awareness, inventory, planning, Integrated Weed

Management, monitoring and evaluation, and research and technology transfer. PAWs and additional guidance such as the Certified Weed-Free Forage Program are integral to the CCNCA weed management program.

There will also be extensive weed inventory and treatment prior to any facility construction, e.g. eliminating weeds before a designated river campsite is constructed.

The BLM will conduct an annual inventory of purple loosestrife and Hoary Cress within the River Corridor, conduct a 3-year inventory cycle for Wilderness, as well as a 5-year inventory for the remaining acreage in the CCNCA.

- **Tamarisk:** The BLM will manage tamarisk around spring sites in the Wilderness, releasing bio agents, if approved, for large-scale reduction in extensive stands. Tamarisk will also be managed at select sites in the River Corridor.

- **Purple Loosestrife:** The BLM will conduct an annual inventory and eradication trips from Loma to Westwater (Utah).

- **Russian Knapweed:** The BLM will continue eradication efforts from Mee Corner to Mee Canyon, along the south bank of the Colorado River. It will also attempt eradication of Russian knapweed on Machinery Bottom and continue Wilderness treatments of Russian knapweed and Canada thistle until completely eradicated.

- **Hoary Cress (Whitetop):** The BLM will conduct annual inventory and eradication trips from Loma to Westwater to control Hoary Cress and will continue treatment of infestations at Salt Creek and I-70.

Forestry

The practice of taking woodland products within the CCNCA will be discontinued. The option of allowing some cutting to facilitate clearing trees for trails, recreation projects, land health initiatives, and wildlife projects will be considered.

Wildlife, Fish and Aquatic Species

The BLM will facilitate Colorado Division of Wildlife (CDOW) population management plans and develop basic informational facilities for the Rabbit Valley Watchable Wildlife Site. The features making Rabbit Valley, north and south of I-70, a designated State Important Bird Area will be protected.

A detailed inventory of fish and wildlife will continue to be developed, and the CCNCA will be managed to maintain the existing species. The BLM, in cooperation with the Colorado National Monument whenever feasible, will work with appropriate wildlife management agencies, including CDOW and the U.S. Fish and Wildlife Service, to monitor the fish and wildlife and provide information to agency management for actively responding when an impact threshold has been approached. Thresholds will be defined

for each species to the extent of budget constraints. However, any unanticipated discovery could be evaluated for management action.

Special Status Species

In fulfilling all requirements under the Endangered Species Act, as well as BLM Policy Manual 6840, the BLM will meet habitat obligations for the six listed and two candidate species, while continuing to protect 25 BLM-listed sensitive species within the CCNCA. Three species listed under the state endangered species statute will also come under this umbrella. A detailed inventory of Special Status Species will continue to be developed.

Policies of a narrow tolerance for toxicants and pesticides, protection of peregrine eyries, and openness to restoring native species populations will be continued. Habitat improvements for special status species will be implemented and may include water developments, food and cover plot plantings, re-introductions, prairie dog den insecticide dusting, backwater development for native fish, and artificial dens (kit foxes, burrowing owls).

Historic and potential habitat for the Gunnison sage-grouse will be managed to attract and support this species. A strategic plan for managing sage grouse will be drafted by the CDOW and the BLM as outlined in the conservation plan prepared by the Pinyon Mesa Gunnison Sage-grouse Working Group (Graham 2000). It will cover the public land on Pinyon Mesa, Glade Park and the CCNCA. This plan will incorporate guidance from the Gunnison Sage-grouse Range wide Conservation Plan.

The BLM, in cooperation with the Colorado National Monument whenever feasible, will work with appropriate wildlife management agencies, including CDOW and the U.S. Fish and Wildlife Service, to monitor the Special Status Species and provide information to agency management for actively responding when an impact threshold has been approached. These thresholds will be defined for each species. Nonetheless, unanticipated conditions will also be evaluated for management action.

Rangeland

Grazing use will be in accordance with the Taylor Grazing Act, FLPMA, Public Rangelands Improvement Act (PRIA), 43 CFR 100 and 4180, the Wilderness Act, grazing permits, and BLM Policy.

Current livestock management will be maintained and changes made if monitoring indicates downward trends or a failure to meet standards. Intensive grazing management plans (Allotment Management Plan) will be established for allotments where additional management is deemed necessary. Any grazing permit that is relinquished or canceled will be evaluated for future allocation and level of use.

Additional range improvements will be utilized to improve grazing management in accordance with grazing management plans. Vegetation studies and experiments will be maintained and rehabilitation efforts appropriate for the area will be applied.

Jones Canyon will be added to current exclusions on livestock grazing in Mee, Knowles, and Rattlesnake Canyons to protect riparian values. Other canyons will be monitored to determine if additional exclusions might be necessary in the future. The Colorado River allotment will remain in an unalloted status to protect resources.

Domestic sheep use will be excluded in the Lower Bench and Colorado Ridge allotments and north of Black Ridge via existing agreements. Sheep grazing north of the river will be analyzed on a case-by-case basis. Domestic sheep use managed by Utah within the CCNCA will be evaluated when the permit is transferred.

The public will be educated on livestock grazing and its relationship to the environment and natural cycles.

Cultural Resources

Cultural resources will be managed according to existing legislation, regulations, Executive Orders, and BLM policy. Measures to protect and manage cultural resources will be required in all land use activity plans, including those associated with recreation management and off-highway vehicle (OHV) activities. Measures will be designed in conjunction with appropriate consulting parties as defined by the BLM National Programmatic Agreement, Colorado State Protocol, and BLM Manual (8100 series) addressing cultural resource management.

Section 106 of the NHPA will be completed for federally funded or licensed undertakings prior to all surface-disturbing or other activities that could affect cultural resources. Identifying cultural resources and areas of religious and cultural importance that are eligible for listing on the National Register of Historic Places and assigning to the appropriate cultural resource use allocation will occur. Mitigation will be completed on historic properties that are adversely affected by the undertaking. Preservation of resources in place is the preferred mitigation strategy.

Proposed activities will not be approved until compliance with Section 106 of the NHPA has been completed and documented. Cultural resource condition will be monitored during implementation.

Develop and implement a base-level proactive cultural resource program required under Section 110 of the NHPA. A reasonable amount of outreach/customer service work, Native American consultation, interpretation and environmental education, cultural resource inventories, data recovery and recordation efforts, restoration and protection of "at-risk" site efforts, and systematic monitoring of cultural sites treatments are to be completed annually. The level of proactive cultural resource program work will be determined annually within constraints of available funds and staff however, additional

funding to conduct at least 500 acres of Class III inventory per year within the CCNCA will be pursued annually.

Paleontological Resources

Information on paleontological resources will continue to be gathered. A valid BLM Paleontological Resources Use Permit will be required for collection of all vertebrate and other scientifically important fossils. Within the BRCW, BLM scientific and educational surface collecting permits will allow surface collecting of up to a 1-meter by 1-meter square to a 20-inch depth per site. Any scientific collection that will disturb any area greater than that will require that an Environmental Assessment (EA) be done before such disturbance and/or collecting is permitted. Collection and removal will be done by small one-handed tools only.

The entire CCNCA will be closed to all recreational collecting of rocks, minerals, and fossils. No archeological materials such as chipped rocks, arrowheads, or other prehistoric or historic artifacts could be collected.

Recreation

General Management Actions Common to All Areas in the CCNCA:

- Recreation in the CCNCA will be managed for beneficial outcomes. Ten discrete, recreation management units have been identified for the CCNCA (Figure 2-10) and benefits-based management objectives have been written for each of these sub-zones. Each sub-zone exhibits a unique set of recreation opportunities (i.e., consisting of activities, experiences, and benefits), use patterns, and management issues and actions that combine to facilitate the production of a distinctive recreation outcome.

- To support adaptive management of the CCNCA, support and approval for a mandatory, no-fee, self-registration system will be sought for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends, to the BLM and other affected parties.

- During the life of the proposed CCNCA RMP, it can be anticipated that an activity not addressed or analyzed within this plan could become popular enough to result in adverse social and physical impacts. Examples include, but are not limited to, geocaching, hovercrafting, and land sailing. If monitoring and evaluation determine that the activity is having a detrimental impact, the BLM reserves the right to prohibit that use, or to require that the user apply for a special recreation permit until the potential impacts are adequately analyzed and appropriate areas to accommodate the activities are identified.

- There will be no discharging of any projectile, by means of (including but not limited to) firearms, bows, crossbows, and paintball guns with the exception of official law

enforcement activities, certain military operations, and hunting activities in conformance with existing laws and regulations.

- Hunting will be allowed in conformance with CDOW laws and regulations.
- All motorized and mechanized use will be limited to designated roads and trails.
- The BLM will restore closed roads having no administrative benefit and not included in range allotment agreements.
- All dirt roads to be maintained for public access will be designated, and non-designated roads will be closed.
- As shown on Figure 2-4 (No. 7) some routes north of I-70 will be closed.
- As a way to mitigate impacts, trails will be modified as needed.
- In general, locating trails near known paleontological or cultural sites will be avoided.
- A comprehensive "Interpretive Plan" for the CCNCA considering all aspects of interpretation, education, and public outreach will be developed.
- The BLM will identify partners and develop Friends organizations to assist with outreach and education. The BLM will also strive to involve user groups, volunteers, and other interested public in maintaining the resources through partnerships, adopt-an-area programs, and special events.
- All parking facilities will be contained to prevent gradual encroachment into the surrounding area.

Mack Ridge Planning Zone (Figure 2-3)

- Designated uses for existing trails in the Mack Ridge Zone will be as follows:
    - Horsethief Loop, Kokopelli's Trail (within the Mack Ridge area), Lion's Loop, Mary's Loop, Steve's Loop, Rustler's Loop, and Troy's Loop – hiking, equestrian and mountain bikes.
    - Mack Ridge Trail – hiking and mountain biking to the first intersection with the remainder of the trail allowing equestrian use.
    - Moore Fun Trail – hiking and mountain biking only.
- New trail proposals include the following (Refer to Figure 2-3 for the following trail proposals):

- *(I)* Construct trail segment C to replace the end of the dirt road presently used as part of Steve's Loop.

- *(I)* Equestrian use will be limited to designated trails only.

- *(I)* Trail A will be designated utilizing dirt roads and approximately ½-mile of new construction (single track).

- *(I)* Segment E will be constructed to connect trail segment A and the Mary's Loop Trail.

- *(I)* Construction of a trail running parallel along the south side of the frontage (Hawkeye) road will be considered as a future option if traffic on the frontage road becomes a safety concern.

- *(I)* Connector J will be constructed between the southern-most point of the Troy Built Trail and the end of the Mack Ridge single-track trail.

- *(I)* Trail F will be constructed connecting the Mack Ridge Trail to the Mack Ridge Trailhead.

- *(I)* Segment D connecting segment F to the Mary's Loop access from the frontage road will also be considered, allowing an alternative Mack Ridge Trail route for equestrians.

- *(I)* Segment G will be constructed from the frontage road to the gated dirt road.

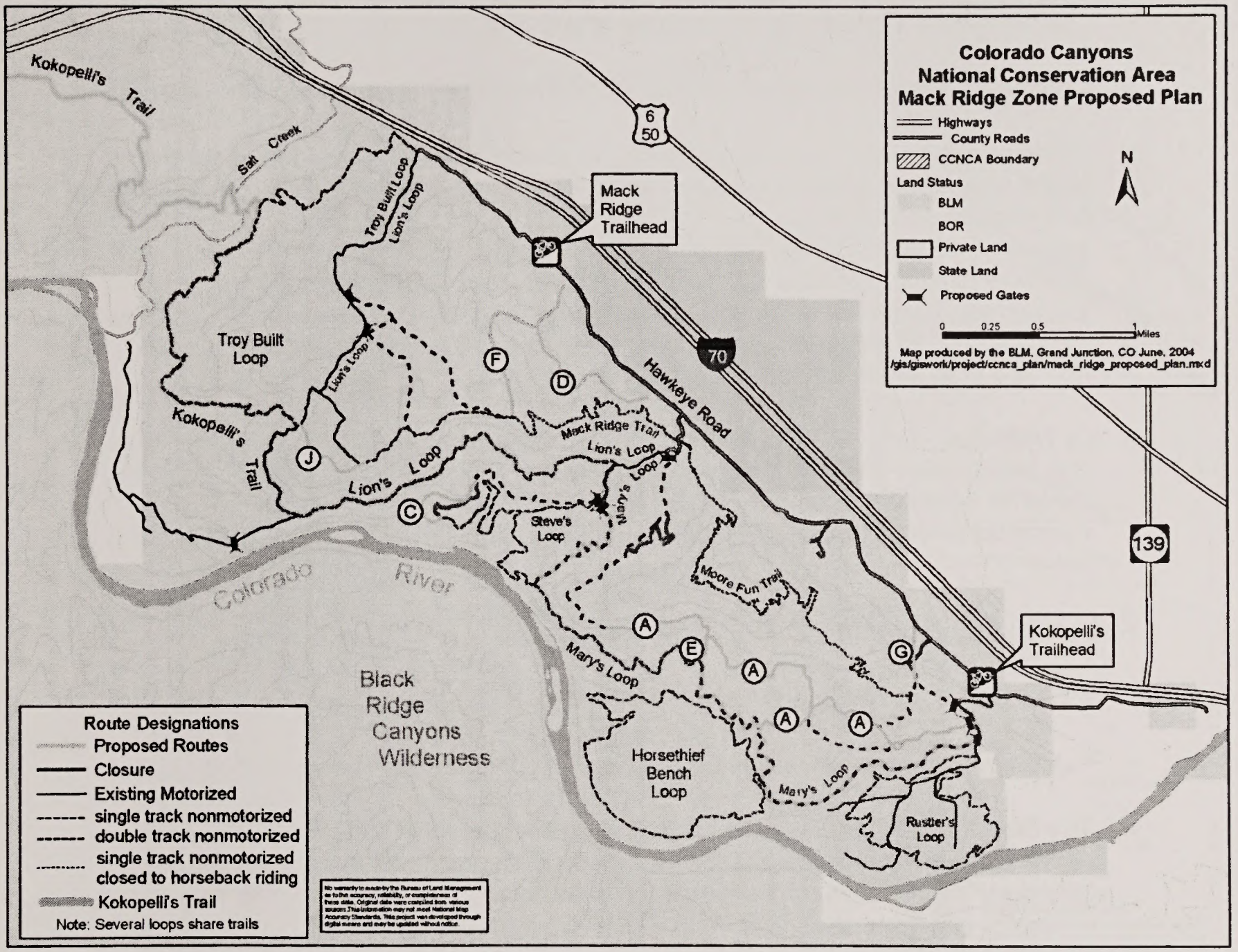
- Motorized use will be restricted to the road portion of Lion's Loop to, and including access out to, the Overlook, county roads, and designated parking areas.

- *(I)* A number of roads, or segments of roads, will be closed and restored. This includes the road providing the same access as trail segment G, as well as the end of the road on Steve's Loop providing the same access as segment C. The short, dead-end segment heading south from Hawkeye Road will also be closed and restored, as will the segment adjacent to the dirt road connecting the county road to the west end of trail proposal A.

- *(I)* Roads will be gated or motorized barriers placed at 9 locations as shown on Figure 2-3.

- The Mack Ridge area will be designated for day-use only, with fires, camping and nighttime use prohibited. Exceptions to this will be allowed only under special circumstances and with the approval of the CCNCA or Grand Junction Field Office manager.

Figure 2-3
Mack Ridge Planning Zone



- There will be no camping facilities and no dispersed camping within the Mack Ridge Zone. Restrooms will be provided at high-use parking areas.

- Tour companies can not have more than a total of 15 riders (counting clients and guides) on the Mack Ridge trail system at any one time.

- Commercial equestrian guide permits will not be issued for the Mack Ridge area.

- When possible, large events in January and February will be avoided to reduce stress to livestock (calving season), and competitive events will be limited to hiking and running events.

- Full-time commercial mountain bike permits will be limited to 4 at any one time. Equestrian events will be limited to weekdays. Events with more than 50 participants will be limited to one event per month, plus two additional (14 maximum per year) but no more than two in any one month.

- *(I)* Trailhead signs will be provided reflecting information regarding challenge level and trail length. The trailhead sign at Horsethief Bench will recommend directional travel for mountain bikes (clockwise) and equestrians (counter-clockwise). If warranted directional travel will be implemented throughout the Mack Ridge trail loop system.

Rabbit Valley Planning Zone (Figure 2-4)

- All motorized and mechanized use will be limited to designated roads and trails.

- Fire pans or fuel stoves will be required and woodcutting will be prohibited.

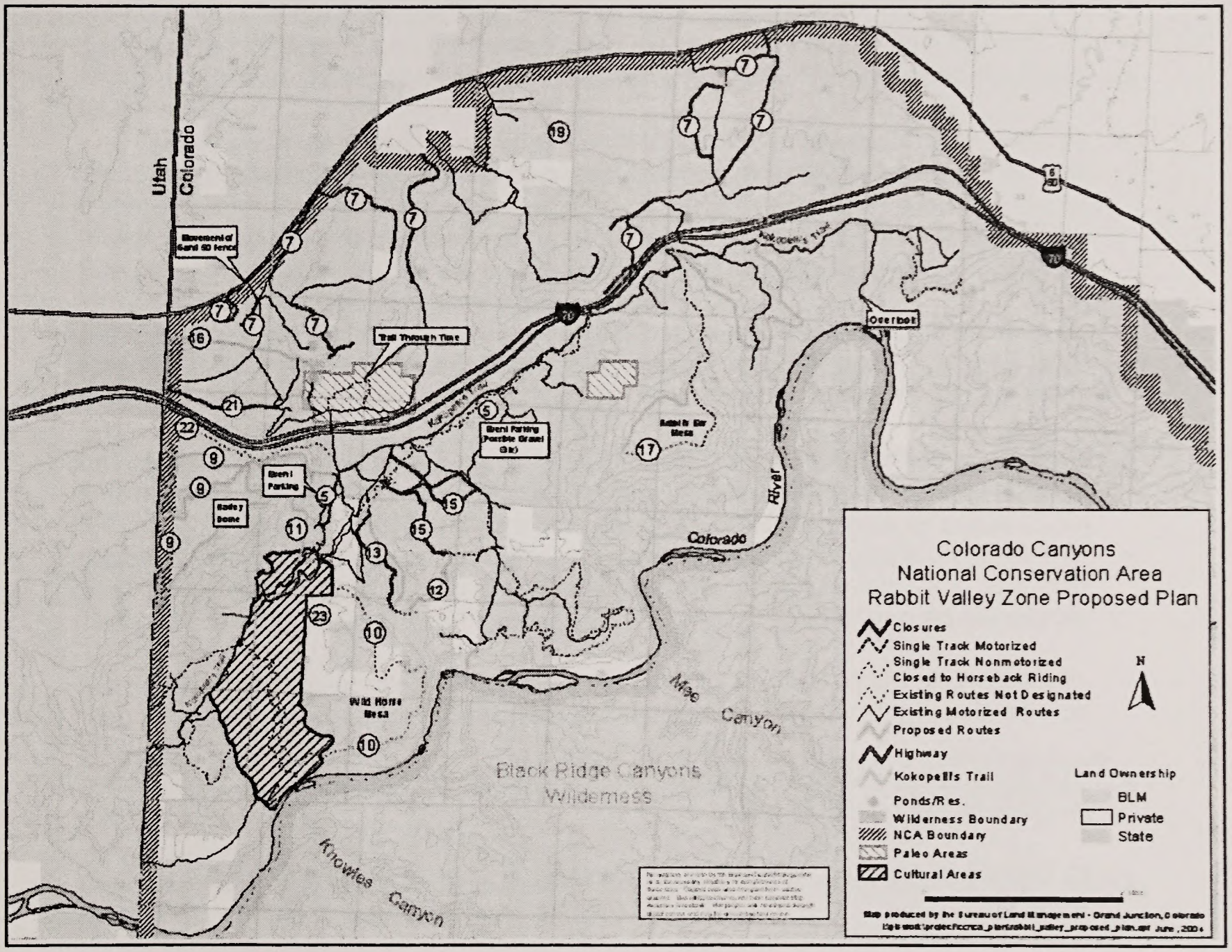
- The BLM Grand Junction Field Office will coordinate with BLM Moab (Utah) in developing and maintaining management consistency along the common state boundary shared by Rabbit Valley and Utah Rims.

- *(I)* The Trail Through Time, McDonald Creek Trail, and the Rabbit's Ear Trail are all designated for hiking only.

- *(I)* Wild Horse Mesa will be designated as no motorized or mechanized use (#10), and if the Jouflas Property were to be acquired, existing routes on Wild Horse Mesa will be designated as hiking and equestrian use only (#10).

- *(I)* The trail running parallel to and south of I-70 will also be designated for hiking and equestrian use (#22).

Figure 2-4
Rabbit Valley Planning Zone



- *(I)* A single-track trail system will be developed in the Harley Dome vicinity to provide connectivity from eastern Rabbit Valley to the western Utah trail system (#9).

- *(I)* Trail No. 2 will be relocated off the valley floor to the escarpment west of the main entrance (#11).

- *(I)* Trail No. 4 will be connected to Trail No. 3 along the upper escarpment and Trail No. 3 will be relocated to the opposite side of the drainage (#12 and 13).

- *(I)* Dead-end routes protruding south from the frontage road east of the main entrance will be closed if they have no destination and provide no benefit (#14).

- *(I)* Trail Nos. 4 and 5 will be relocated to the valley floor and the dry wash running east-west in the same area (#15).

- *(I)* A single-track, multiple use route (#16) will be designated that begins west of the Trail Through Time at the stock pond and continues north and west across the rim, dropping into the wash and continuing to the state line.

- *(I)* The end of the Rabbit's Ear Trail will be extended to create a designated loop trail on top of the mesa (#17).

- *(I)* If feasible, a looped trail will be provided for motorized use to approach the river, however, a ¼-mile river buffer will be maintained and vehicle access along the shore vicinity will be prevented.

- *(I)* Camping in the Rabbit Valley Zone will be limited to no more than seven consecutive nights, and portable toilets are mandatory for overnight, dispersed use.

- *(I)* If the Jouflas property south of I-70 were to be acquired, a formal campground will be constructed on that property.

- *(I)* Dispersed camping sites will be designated if monitoring indicates unacceptable impacts.

- *(I)* A large area for a recreational park and events (# 5) will be developed and designated. Developing and designating a smaller event site at a location to be determined will also be considered.

- *(I)* A site plan will be developed, considering off-loading requirements for both horses and OHVs, for the vicinity of the Rabbit Valley primary entrance south of I-70 (exit 2).

- *(I)* Surfaces at parking areas, trailheads, and group campsites will be hardened by means other than paving.

River Corridor Zone (Figure 2-5)

- ***(PD)*** No camping will be allowed on Doggone Island.

- All fires in this planning zone must be contained in a fire pan, whether visitor access is via the river or land, or the visit is a single day or multiple days.

- Group size will be limited to 25 individuals within the first two miles south of the Colorado River.

- The current voluntary campsite reservation system at Loma Boat Launch will be continued, with selected campsites identified on a map (Figure 2-5) but not at the sites themselves.
- Fire pans or propane heaters will be required year-round for overnight use and will include day users from November 1 through April 30.

- Portable toilets will be required for all river users year-round, including users accessing the River Corridor from land.

- Activity, including camping and trail construction, will be restricted within one-half mile of known bald eagle nesting sites along the Colorado River corridor from November 15 through July 30. If necessary this will be extended beyond seasonal to a year-round restriction.

- There will be no cutting of standing vegetation.

Wilderness Planning Zone (Figure 2-6)

- Motorized and mechanized use is not allowed within BRCW, except for administrative use and search and rescue in accordance with current Memorandums of Understanding (MOU).

- Group size will be limited to 25 individuals within the first two miles south of the Colorado River and to 12 individuals elsewhere in the Wilderness.

- Designated trails within the Wilderness are available for hiking and equestrian use, although some of the trails are not traversable by horse. Portions of the designated trails in the Wilderness Zone fall outside of the Wilderness boundary, they are still limited to hiking and equestrian use. Designated trails include the Rattlesnake Arches Trail; Mee Canyon Trail; Knowles Canyon Trail; Jones Canyon Trail; and the Pollock Bench Trails System, which includes Flume Canyon (partially outside of the Wilderness) and the Devils Canyon Trails System, which includes Kodel's Canyon (partially outside the Wilderness).

Figure 2-5
River Corridor Zone

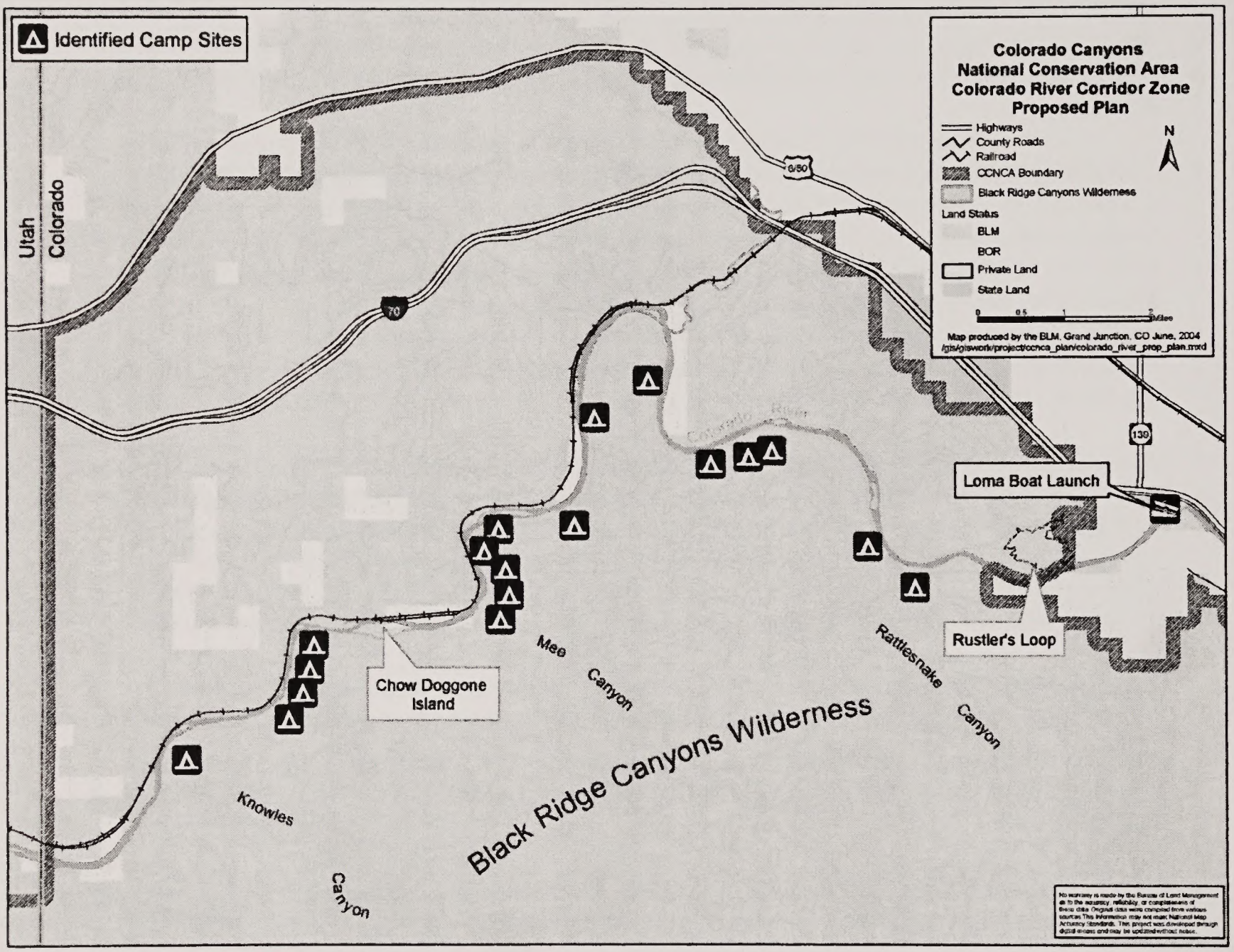
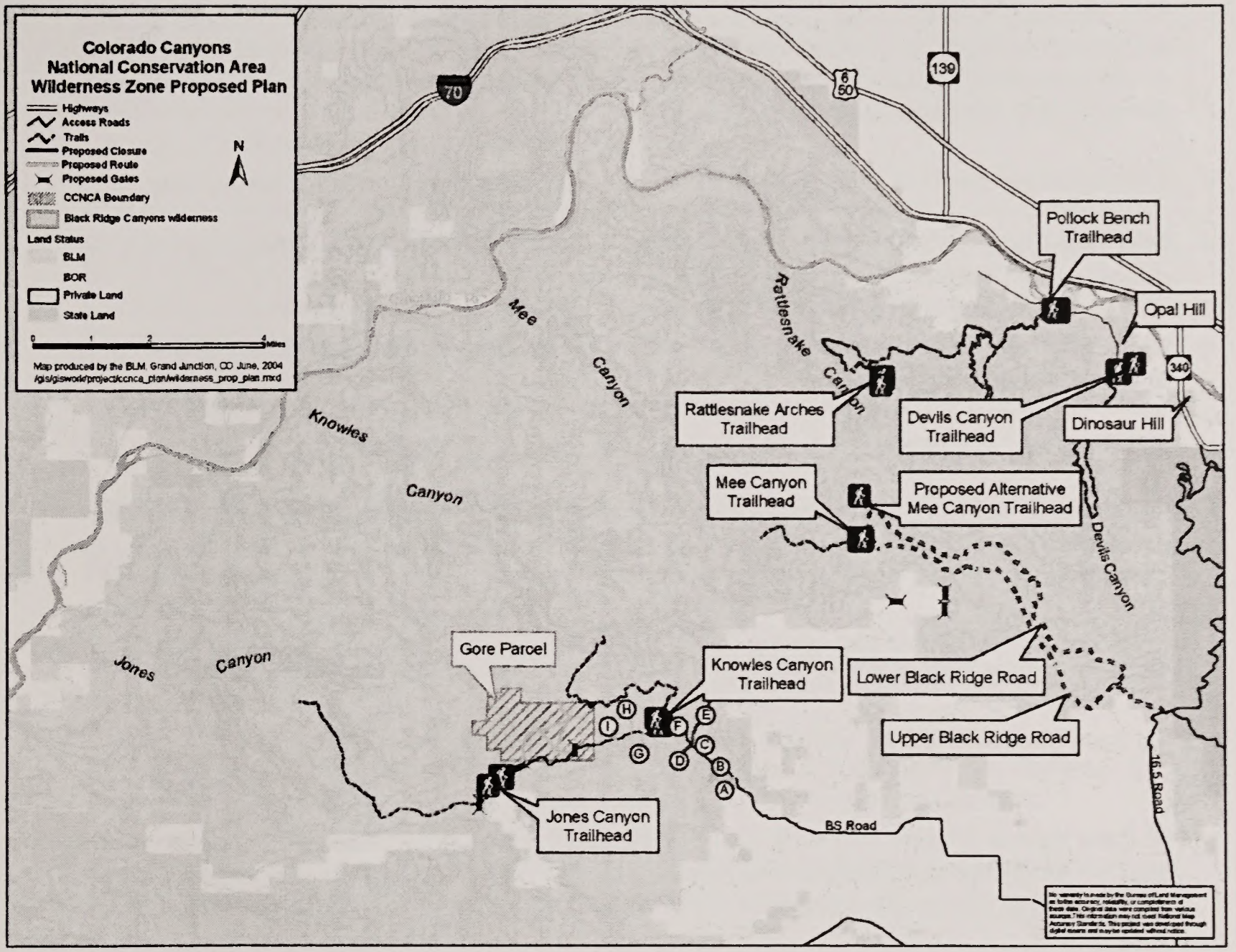


Figure 2-6
Wilderness Planning Zone



- The annual opening date of the Upper Black Ridge Access Road will be moved from April 15 to the Saturday of Easter weekend, if weather and road conditions permit, or as soon after Easter as possible based on safety conditions. **(PD)** Closure of the road will occur on August 15.

- The acquired "Gore Parcel" (Figure 2-6) will be closed to motorized/mechanized access, except as needed for administrative use and allotment agreements. The dirt road, west of the gate on BS Road, is closed to motorized/mechanized access except as needed for administrative use and allotment agreements.

- The Dinosaur Hill Trail is outside of the Wilderness boundary and is for hiking only.

- ***(I)*** A hiking and equestrian trail, heading north from the Jones Canyon Trailhead, will be developed if needed for mitigating impacts.

- ***(I)*** An alternate Mee Canyon Trailhead will be designated at the intersection of the upper and lower Black Ridge roads.

- ***(I)*** Hiking and equestrian use will be allowed in the vicinity of Opal Hill.

- ***(I)*** The BLM will work with the Colorado National Monument (COLM) on identifying trail connections and will inform the public at trailheads that leashes are required for dogs on these trails.

- ***(PD)*** Motorized vehicle use on the lower Black Ridge road, from August 15 to February 15 only, will be allowed.

- ***(I)*** Spot graveling will be allowed as needed for maintenance of BS Road.

- ***(I)*** Spur Roads (Figure 2-6) A, B, C, F, G, H, and I will be designated and contained to prevent lengthening. Spurs D and E will be closed and rehabilitated. An area for horse trailer parking will be developed off the end of Spur C.

- ***(I)*** The maintenance levels will remain at the current standard for both the lower Black Ridge and Rattlesnake Arches access roads.

- ***(I)*** A parking area will be created at the sagebrush flats on lower Black Ridge road, just before the intersection with the upper Black Ridge road.

- The Rattlesnake Arches access road and trailhead will be designated as a no camping, no campfires area, anywhere within ¼ mile of the Rattlesnake Arches Loop Trail, including the Arches.

- Historical camping spots, along the upper and lower Black Ridge roads, will be designated; and dispersed camping will be limited to designated sites only.

- The Pollock Canyon, Devils Canyon and Kodel's Canyon trail system, including trailheads, will be designated for day-use only, with fires, camping and nighttime use prohibited, from the CCNCA boundary to the Wilderness boundary.

- Dispersed camping south of the Wilderness boundary will be limited to designated sites, allowed at the ends of spur roads A, B, C, F, G, H, and I along BS Road (Figure 2-6). Additional dispersed camping sites will be designated along BS Road from the Knowles Canyon Trailhead to the Jones Canyon Trailhead.

- ***(I)*** If future demand or resource impacts dictate the need for a campground outside the southern boundary of the Wilderness, the location will be at the triangle where the upper Black Ridge road and the Mee Canyon access road intersect (if outside of the wilderness boundary) or at the sagebrush flat on the lower Black Ridge road just before the intersection with the upper Black Ridge road.

- Cutting of dead or live standing vegetation for firewood inside the Wilderness boundary is not allowed.

- Campers will be required to have portable toilets and fire pans (or fuel stoves).

- Woodcutting or gathering south of the Wilderness boundary will be limited to areas where chaining has occurred.

- ***(I)*** Restrooms will be constructed at various designated Wilderness trailheads only as the need arises.

- ***(I)*** Parking will be allowed and the "turnaround" improved at the end of the Rattlesnake Arches access road, but the area will be contained to prevent encroachment.

- ***(I)*** Additional parking areas will be created along the Rattlesnake Arches road, designed for turnarounds, and contained to prevent encroachment.

- ***(I)*** The Knowles Canyon Trailhead will be moved to Road F and expanded to accommodate additional parking.

- ***(I)*** The Kings View access road (Mesa County I.3 Road) will have no Wilderness access trailheads beyond the Pollock Bench Trailhead.

- ***(I)*** Parking will be allowed at the flat rock surface area on the south side of BS Road to the southwest of the Knowles Canyon Trailhead, while parking along the Rattlesnake Arches access road will only be allowed at designated locations.

- ***(I)*** All fences that no longer have a purpose will be removed.

- *(I)* When dog waste in high-use areas becomes a problem, methods of controlling it will be developed.

- *(I)* Current posted visitor information regarding road conditions and closures, along with user guidelines for the upper and lower Black Ridge roads, will be maintained. All-terrain vehicle (ATV) use will be directed to the Rabbit Valley Zone as a way to discourage use outside the upper Wilderness vicinity. Educational material will include information regarding private property and the intended uses of various parking facilities in the Devils Canyon/Pollock Canyon Trails System.

- BLM will collaborate with the FAA in developing appropriate flight restrictions over the CCNCA and will request that the CCNCA and its advisory restrictions be included on the National Aeronautical Charts.

- No Special Recreation Permits will be granted for air tours over the CCNCA

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Benefits Based Management for Recreation

Managing for beneficial outcomes consisting of experiences and other quality of life benefits requires shifting the focus of recreation management beyond facility developments, management controls, and providing programs and services. These projects and programs, while important, are only the means to important ends, value-added experiences and benefits.

The biggest difference between managing projects and administrative actions for activities and managing for experiences and benefits is that management objectives now target specific experiences and beneficial outcomes for those activities instead of project developments and resource protection. These benefits-based management objectives have been written for the ten sub-zones identified for CCNCA (Figure 2-10). The specific experience and benefit outcomes targeted by management objectives were determined by considering the extensive public input given during the planning process revealing the preferences of both visitors and resident customers, the capacity of each recreation management unit to produce desired recreation opportunities, the availability of other similar opportunities within the immediate market area, and management constraints for the CCNCA.

Opportunities for the attainment of desired experiences and benefits targeted above are produced through a combination of recreation setting character conditions and corresponding management actions.

Because setting character is in turn determined by those actions, it is the next logical step in planning for recreation. Three broad recreation setting categories are mapped for the CCNCA, each affecting the production of opportunities for experiences and benefits: the *physical* character of the land and facilities (Figure 2-7), *social* interactions and contact with others (Figure 2-8), and the *administrative* mix of services and controls provided (Figure 2-9).

Figure 2-7
Physical Classes
Recreation Opportunity Spectrum

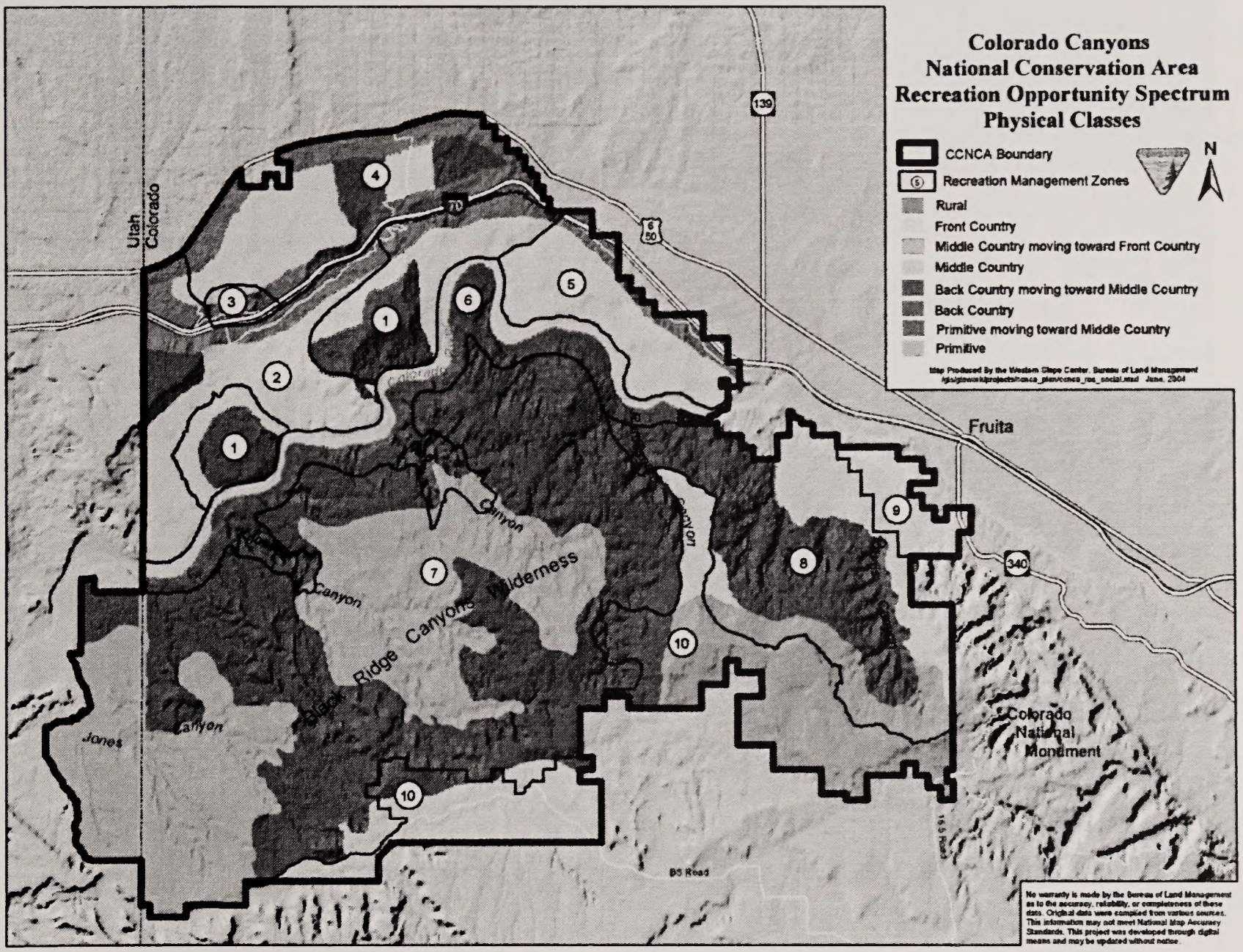


Figure 2-8
Social Classes
Recreation Opportunity Spectrum

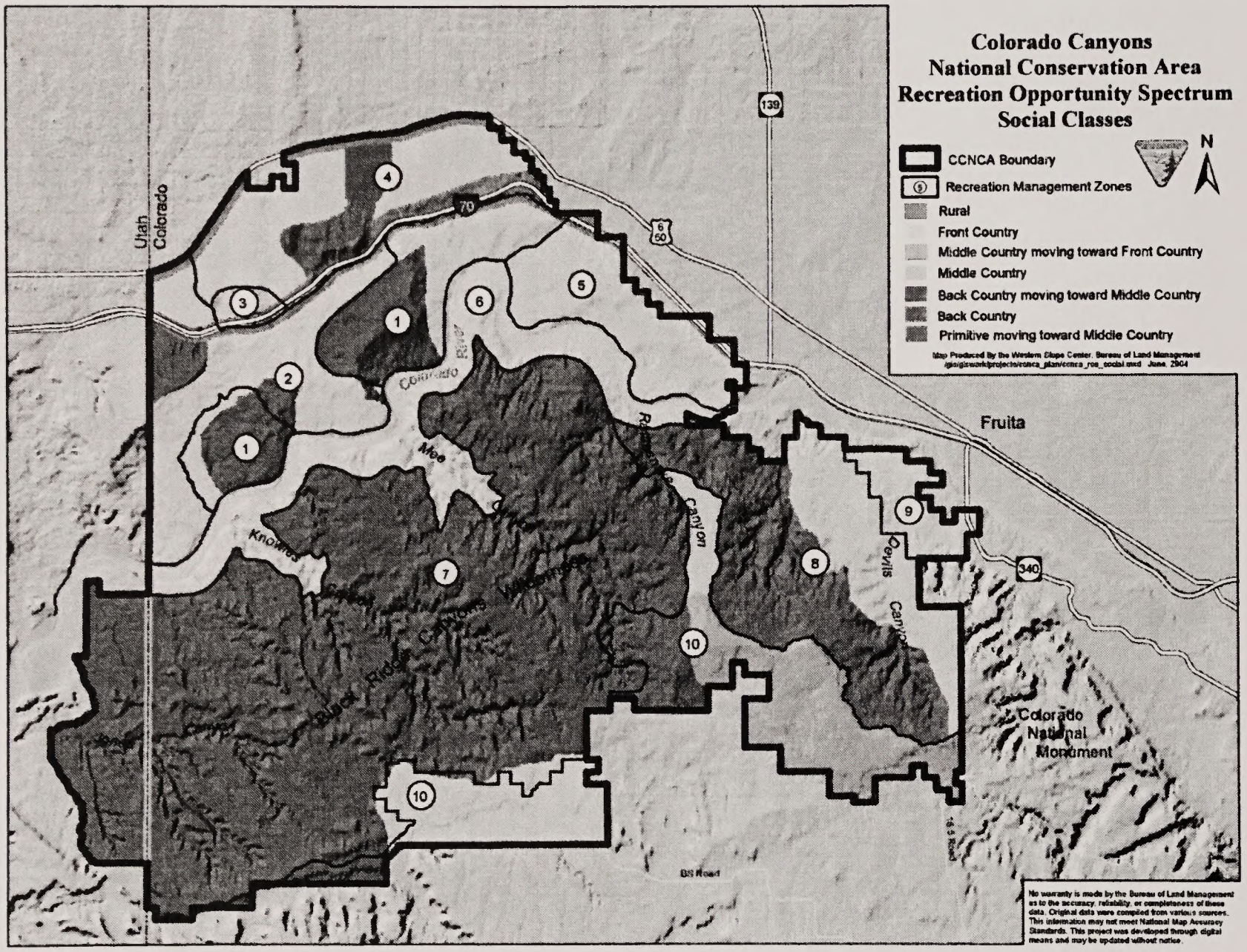
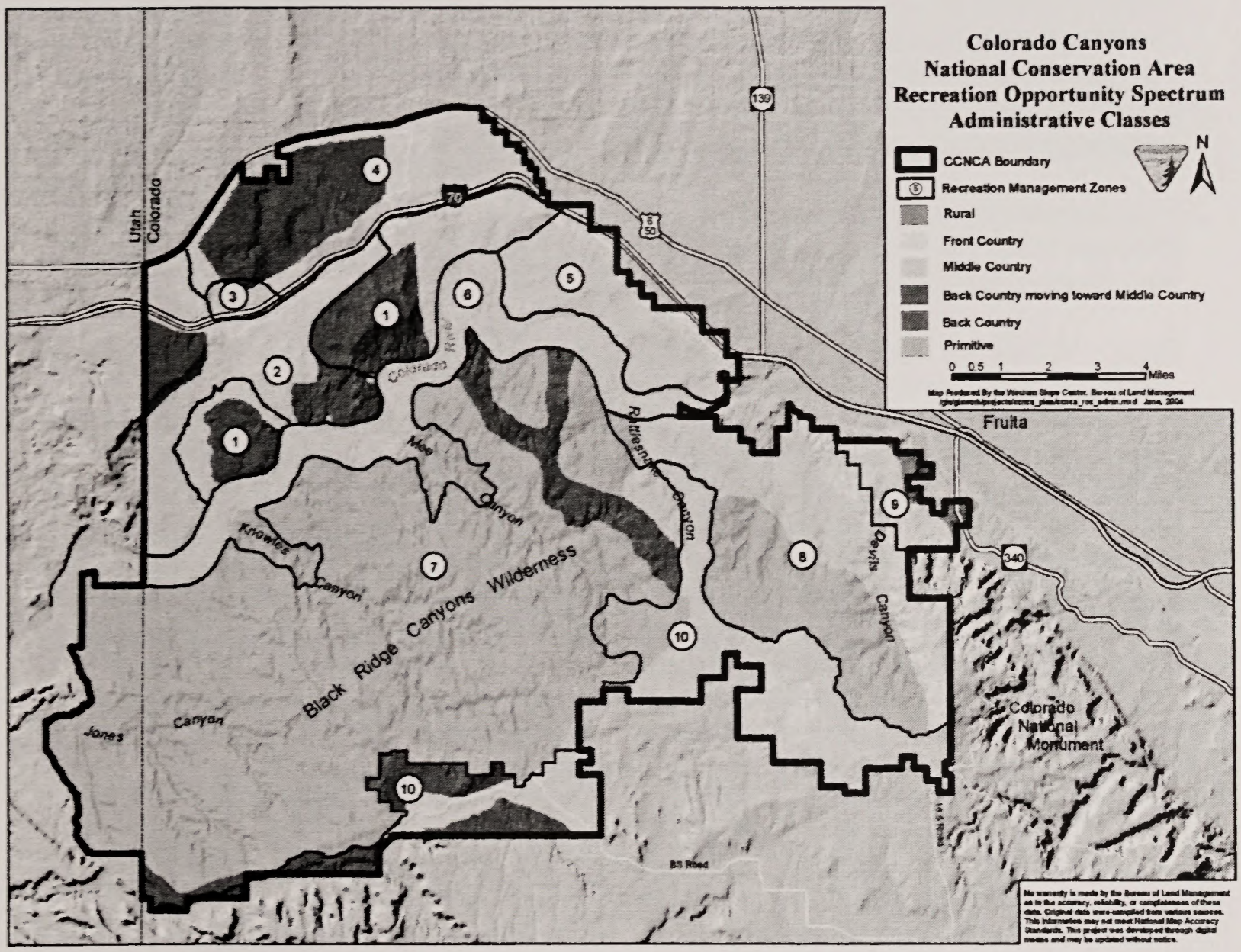


Figure 2-9
Administrative Classes
Recreation Opportunity Spectrum



The character of any recreation setting may be objectively defined along a continuum ranging from primitive to urban in terms of variation of its component physical, social, and administrative attributes. Collectively, these attributes define the character of any recreation setting. Setting character is directly influenced and determined by the management, marketing, and administrative actions of BLM and other recreation-tourism providers. Those actions and the resulting setting character, also affect and actually determine the kinds of recreation opportunities being produced.

There are three broad recreation settings categories and a range of six natural resource classifications are used within the settings. The settings include:
Physical – considers the resources and facilities
Social – looks at visitor use
Administrative – management controls and services

The classifications further define the settings within a range of "urban" to "primitive,"," although there are no areas within CCNCA that fall under the urban classification. A brief description of the classification is as follows:

Rural – Includes a substantially modified landscape with visitors dispersed throughout and a prominent level of agency presence and regulation.
Front Country – The landscape is partially modified with visitors prevalent and agency personnel periodically available. Rules and information are clearly posted.
Middle Country – The landscape is natural in appearance with some modifications not highly noticeable. Visitors will encounter other groups utilizing the area, but agency presence is random. Information and signing are present.
Back Country – The landscape is more natural and the limited improvements tend to blend with the environment. Access does not include motorized vehicles and signing and agency presence is scarce.
Primitive – The landscape is relatively undisturbed with few signs of human presence. Very few encounters with other visitors occur. Regulations and information will normally be posted prior to entering this zone and agency presence is very rare.

Recreation Management Zones

The following tables (Figures 2-11 through 2-20) summarize the components of Benefits Based Management for the ten recreation sub-zones in the CCCNA, including management objectives, recreation opportunities, targeted experiences, desired benefits, proposed management and marketing opportunities to enhance achievement of desired outcomes and monitoring actions. Because desired future conditions, visitor benefits and preferred experiences were integrated into the collaboration process, the recommendations reached through community consensus were easily incorporated into management for beneficial outcomes format used in the tables. The tables provide a concise summary that explain the what, where, when and, most importantly, the why of recreation planning in the CCNCA.

Zone 1: Rabbits Ear/Wildhorse Mesa/McDonald Creek (Fig 2-11)

Zone 2: Rabbit Valley Motorized Area (Fig 2-12)

Zone 3: Trail Through Time/ Dinosaur Hill/ Fruita Paleo Area (Fig 2-13)

Zone 4: High North (Fig 2-14)

Zone 5: Mack Ridge (Fig 2-15)

Zone 6: Colorado River Corridor (Fig 2-16)

Zone 7: Black Ridge Canyons West (Fig 2-17)

Zone 8: Black Ridge East (Fig 2-18)

Zone 9: Urban - Wilderness Interface (Fig 2-19)

Zone 10: Rattlesnake Arches - Mee Canyon Access (Fig 2-20)

Figure 2-10
CCNCA Recreation Management Zones

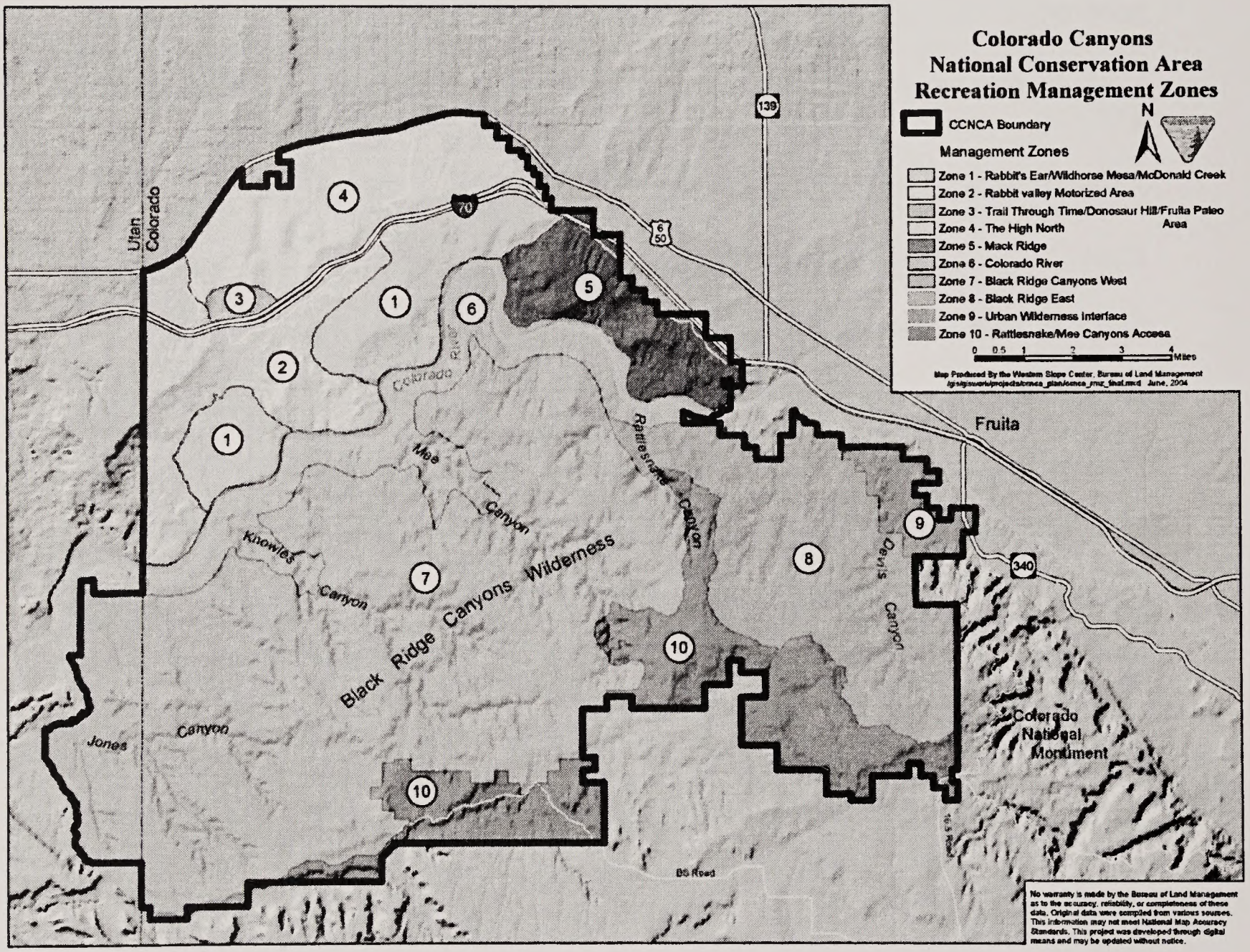

Colorado Canyons
National Conservation Area
Recreation Management Zones
CCNCA Boundary
N
Management Zones
Zone 1 - Rabbit's Ear/Wildhorse Mesa/McDonald Creek
Zone 2 - Rabbit valley Motorized Area
Zone 3 - Trail Through Time/Donosaur Hill/Fruita Paleo Area
Zone 4 - The High North
Zone 5 - Mack Ridge
Zone 6 - Colorado River
Zone 7 - Black Ridge Canyons West
Zone 8 - Black Ridge East
Zone 9 - Urban Wilderness Interface
Zone 10 - Rattlesnake/Mee Canyons Access
0 0.5 1 2 3 4 Miles
Map Produced By the Western Slope Center, Bureau of Land Management
June, 2004
Utah
Colorado
139
70
6
50
Colorado River
Fruita
Mee Canyon
Rattlesnake Canyon
Knowles Canyon
Black Ridge Canyons Wilderness
Jones Canyon
Devils Canyon
340
Colorado National Monument
B5 Road
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This project was developed through digital means and may be updated without notice.

Figure 2-11

RABBITS EAR/WILDHORSE MESA/MCDONALD CREEK (Zone 1)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Back Country Muscle-Powered Exercise for Scenic and Cultural Appreciation recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization)

Outcomes

Primary Activities

- Back Country Hiking
- Horseback Riding (McDonald/ Wildhorse only)
- Rock Art Viewing (McDonald/ Wildhorse only)

Experiences

- Enjoying easy access to diverse back country recreation
- Escaping everyday responsibilities for awhile
- Savoring canyon, river, and rock-art aesthetics
- Feeling good about solitude and being isolated
- Enjoying being able to discover and learn about earlier cultures

Benefits

Personal:

- Improved self reliance
- Improved physical fitness
- Enhanced sense of freedom in being able to get to this special place
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Improved outdoor knowledge, skills, and self-confidence
- Greater sense of overall wellness
- Enhanced cultural resource stewardship ethic

Household & Community:

- Improved quality of life
- Greater household awareness of and appreciation of our cultural heritage
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle

Economic:

- Increased work productivity
- Reduced health maintenance costs

Environmental:

- Reduced looting and vandalism of prehistoric sites
- Increased stewardship and protection of natural resources

Figure 2-11 (cont'd)

RABBITS EAR/WILDHORSE MESA/MCDONALD CREEK (Zone 1)		
Setting Prescriptions		
Physical • Primarily backcountry and middle country with a section of front country due to an improved road for access. In general the area is natural in appearance and non-roaded	Social • Group size up to 12 • Expect 15–29 encounters per day	Administrative • Brochures are available for information and opportunities • Agency presence which decreases as remoteness increases • Mostly non-motorized/non-mechanized other than access road (Kokopelli's Trail)

Management and Marketing Actions

Management Actions:

Roads and Trails

- Restore closed roads that provide no administrative benefit and are not included in range allotment agreements.
- Modify roads and trails as needed to mitigate impacts.
- Rehab non-designated trails and trails that are closed unless there is a potential future use
- Close dead-end spurs that lateral south from the frontage road if no purpose is identified (#14 on map)
- Contain parking facilities to prevent encroachment
- Continue the existing route that extends the end of the Rabbit's Ear Trail to create a designated loop trail on top of mesa (#17 on map)
- Harden surfaces at parking areas, trailheads, and campsites only when needed to prevent resource impacts.

Marketing Actions:

- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Strive to involve user groups, volunteers, and other interested public to help maintain resources through partnerships, adoption programs, special events and/or a "friends group."
- Develop opportunities to maintain resources through inform/educate public about cultural resources
- Identify partners and develop "Friends" group to assist BLM in outreach and education

Figure 2-11 (cont'd)

RABBITS EAR/WILDHORSE MESA/MCDONALD CREEK (Zone 1)

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- All motorized/mechanized use is limited to existing trails and roads.
- Rabbit's Ear Trail is designated for hiking only.
- McDonald Creek Trail is designated for hiking only.
- Wildhorse Mesa is designated as "no motorized/mechanized use"
- Designate & maintain all dirt roads for public access and close non-designated roads.
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards
- Equestrian use limited to designated trails only
- Avoid locating trails near known paleo/cultural sites except where specifically intended for interpretation

Camping

- Limited to no more than 7 consecutive nights
- Portable toilets are mandatory for overnight dispersed use
- All open fires must be contained in fire pan (no fires rings)
- No wood cutting
- Dispersed camping sites not designated unless monitoring shows unacceptable impacts.

Shooting

- No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with CDOW regulations

Other

- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Permits

- See Special Recreation Permit Program in Chapter 2

Visual Resources Management

- Class II southern portion
- Class III northern portion near I-70 corridor

Monitoring Actions:

- Assure objectives are being met and setting prescriptions are being maintained
- Monitor implemented actions and evaluate
- A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-12

RABBIT VALLEY MOTORIZED AREA (Zone 2)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Sustainable scenic, diverse motorized and mechanized play area for the Grand Valley, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization)

Outcomes

Primary Activities
- Motorcycle
- ATV
- Mountain bike riding
- Camping

Experiences
- Enjoying frequent exercise
- Access to a range of physical challenge
- Escaping everyday responsibilities for a while
- Savoring canyon-country aesthetics
- Enjoying easy access to diverse recreation opportunities.
- Developing skills, abilities and self-confidence

Benefits

Personal:
- Improved physical fitness
- Better health maintenance
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Improved outdoor knowledge, skills, and self-confidence
- Greater environmental awareness and sensitivity
- More well-informed and responsible visitors

Household & Community:
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle

Economic:
- Positive contributions to local-regional economic stability

Environmental:
- Increased resource stewardship and protection by communities

Setting Prescriptions

Physical
- *Middle* and *front country* with *rural* character along the north portion of this zone, due the proximity of the I-70 corridor. Mostly natural in appearance, with a number of rustic facilities including trails, restrooms, dispersed campsites and signage.

Social
- Group size up to 45
- Could have 30-35 encounters per day beyond encounters in staging or camping areas

Administrative
- Brochures are available for information and opportunities
- Agency personnel are periodically available
- Rules are clearly posted and use may be temporarily restricted due to permitted events or resource concerns due to weather
- Area accommodates multiple-use including OHV

Figure 2-12 (cont'd)

RABBIT VALLEY MOTORIZED AREA (Zone 2)

Management and Marketing Actions

Management Actions:

Roads and Trails

- Restore closed roads that have no administrative benefit and are not included in range allotment agreements
- Modify roads and trail as needed to mitigate impacts
- Rehab non-designated trails and trails that are closed unless there is a potential future use
- Develop multiple-use single-track trails in the vicinity of Harley Dome to provide connectivity to the Utah trail system (#9 on Map)
- Relocate Trail #2 off the valley floor to the escarpment west of the main entrance (#11 on map)
- Connect Trail #4 to Trail #3 along the upper escarpment (#12 on map)
- Relocate Trail #3 to the opposite side of the drainage and connect to Trail #4 (#13 on map)
- Relocate Trail #4 and Trail #5 to on the valley floor to the dry wash that runs east-west in the same area (#15 on map)
- Designate multiple-use single track trail from stock pond west of Trail through Time, head west to State line and south to dirt road (#16 on map).
- Close dead-end spurs that lateral south from the frontage road if no purpose is identified (#14 on map)
- Close and rehab route north of I-70 near Utah border (#21 on map)
- Contain parking facilities to prevent encroachment
- Harden surfaces at parking areas, trailheads, and campsites only when needed to prevent resource impacts.

Camping

- Construct formal campground if BLM successfully acquires the Jouflas in-holding

Other

- Develop a large area for recreational parking and events (#5 on map)
- Consider developing & designating a 2nd group-use site at the disturbed alcove location
- Develop and implement a site plan for the Rabbit Valley entrance vicinity south of I-70

Marketing Actions:

- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Strive to involve user groups, volunteers, and other interested public to help maintain resources through partnerships, adoption programs, special events and/or a "friends group."
- Identify partners and develop "Friends" group to assist BLM in outreach and education

Figure 2-12 (cont'd)

RABBIT VALLEY MOTORIZED AREA (Zone 2)

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails
- All motorized/mechanized use is limited to existing trails and roads.
- Designate trail south of and running parallel to I-70 as non-motorized (#22 on map)
- Avoid locating trails near known paleo/cultural sites except where specifically intended for interpretation
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards
- Designate and maintain all dirt roads for public access & close non-designated roads.
- Equestrian use limited to designated trails only

Other
- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere
- Coordinate with Moab BLM for continuity

Permits
- See Special Recreation Permit Program in Chapter 2

Camping
- Limited to no more than 7 consecutive nights
- Portable toilets are mandatory for overnight dispersed use
- All open fires must be contained in fire pan (no fires rings)
- No wood cutting
- Dispersed camping sites not designated unless monitoring shows unacceptable impacts.

Shooting
- No discharge of any projectile (i.e. target shooting)

Hunting
- Hunting allowed in conformance with CDOW regulations

Visual Resources Management
- Class III - northern portion near I-70 corridor
- Not Rated - most of southern portion

Monitoring Actions:
- Assure objectives are being met and prescribed settings are being maintained
- Monitor implemented actions and evaluate
- A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-13

TRAIL THROUGH TIME/DINOSAUR HILL/FRUITA PALEO AREA (Zone 3)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Roadside Access to Paleontological Resource Appreciation and Education recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization)

Outcomes

Primary Activities
- Viewing Dinosaur Fossils
- Viewing Interpretive Exhibits

Experiences
- Enjoying being able to view fossil remains in-place
- Enjoying hands-on environmental learning

Benefits

Personal:
- Greater overall awareness and understanding of and sensitivity to paleontology
- Improved knowledge of area paleontology and geology

Household & Community:
- Heightened sense of community pride and satisfaction
- Greater household awareness of and appreciation of our natural heritage
- Greater academic advancement of children in science studies

Economic:
- Greater recognition of Fruita as a desired destination for locals and non-locals Maintenance of gateway community's' distinctive recreation-tourism market niche or character
- Increased local tourism revenue

Environmental:
- Increased stewardship and promotion of fossil resources
- Reduced looting and vandalism of prehistoric sites

Setting Prescriptions

Physical
- These areas fall within *front country* and *rural* settings located directly off of paved roads or accessed off an improved road. Mostly natural setting, with some improvements designed to enhance the visitor's experience.

Social
- FPA: May encounter groups of 7-12 people; 15-29 encounters with other groups/individuals
- TTT and Dinosaur Hill: Group size 13-25; Could encounter up to 30+ groups/ individuals per day

Administrative
- Abundant information/interpretation
- Dogs must be on leash in these locations
- Accessible with normal highway vehicle

Figure 2-13 (cont'd)

TRAIL THROUGH TIME/DINOSAUR HILL/FRUITA PALEO AREA (Zone 3)

Management and Marketing Actions

Management Actions:

Roads and Trails

- Restore closed roads that have no administrative benefit and are not included in range allotment agreements.
- Modify roads and trails as needed to mitigate impacts.
- Rehab non-designated trails and trails that are closed unless there is a potential future use
- Contain parking facilities to prevent encroachment
- Harden surfaces at parking areas, trailheads, and campsites only when needed to prevent resource impacts.

Marketing Actions:

- Develop comprehensive interpretive plan
- Strive to involve user groups, volunteers, and other interested public to help maintain resources through partnerships, adoption programs, special events and/or a "friends group."
- Work with the City of Fruita regarding tourism/marketing aspects related to paleo resources
- Work with Museum of Western Colorado to capitalize on scientific paleo-oriented opportunities

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- All motorized/mechanized use is limited to existing trails and roads.
- Designate and maintain all dirt roads for public access and close non-designated roads.
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards
- Equestrian use limited to designated trails only
- The Trail Through Time and Dinosaur Hill Trails are designated for hiking only

Camping

- Limited to no more than 7 consecutive nights
- Portable toilets are mandatory for overnight dispersed use
- All open fires must be contained in fire pan (no fires rings)
- No wood cutting
- Dispersed camping sites not designated unless monitoring shows unacceptable impacts.
- Dinosaur Hill is day-use only
- Shooting: No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with CDOW regulations

Other

- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Permits

- See Special Recreation Permit Program in Chapter 2

Visual Resources Management

- Class II - Fruita Paleo Area
- Class III - Trail Through Time
- Not Rated - Dinosaur Hill

Monitoring Actions:

- Assure objectives are being met and prescribed settings are being maintained
- Monitor implemented actions and evaluate
- A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-14

THE HIGH NORTH (Zone 4)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Little Watchable Wildlife Oasis recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=complete/total realization)

Outcomes

Primary Activities
- Wildlife Watching

Experiences
- Savoring the sight and sound of wildlife and the smell of a natural setting
- Quickly accessing natural resource environments
- Feeling good about solitude and being isolated
- Enjoying teaching others about the wildlife of the intermountain arid West

Benefits

Personal:
- Improved opportunity to view wildlife close-up
- Renewed human spirit
- Increased familiarity with/learning about uncommon species
- Increased assurance that special species are being sustained
- Greater sensitivity to/awareness of the natural ecosystem

Household & Community:
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle
- Enlarged sense of community dependency on improved stewardship of public wildlife resources

Economic:
- Increased desirability as a place to live or retire
- Preserving habitat for special status species that could otherwise become costly to restore

Environmental:
- Increased stewardship and protection of wildlife

Setting Prescriptions

Physical
- From *back country* to *rural*

Surrounded by major paved roads, but w/ limited access. Several dirt roads throughout the area, but still natural in appearance w/ few improvements.

Social
- Group size 4-6; visitors may have 7-15 encounters per day.

Much of this area within a *rural* physical setting, trails enthusiasts prefer other locations for their endeavors.

Administrative
- This area can be accessed via normal 2-wheel drive vehicle
- Agency presence will be low
- On site facilities and signage will be very low key

Figure 2-14 (cont'd)

THE HIGH NORTH (Zone 4)

Management and Marketing Actions

Management Actions:

Roads and Trails

- Restore closed roads that have no administrative benefit and are not included in range allotment agreements.
- Modify roads and trails as needed to mitigate impacts.
- Rehab non-designated trails and trails that are closed unless there is a potential future use
- Contain parking facilities to prevent encroachment
- Harden surfaces at parking areas, trailheads, and campsites only when needed to prevent resource impacts.
- Close excess dirt roads (#7 on map)

Marketing Actions:

- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Strive to involve user groups, volunteers, and other interested public to help maintain resources through partnerships, adoption programs, special events and/or a "friends group."
- Work with U.S. Fish & Wildlife Services (F&WS), CDOW & appropriate interest groups to explore opportunities to enhance zone objectives
- Identify partners and develop "Friends" group to assist BLM in outreach and education

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- All motorized/mechanized use is limited to existing trails and roads.
- Designate and maintain all dirt roads for public access and close non-designated roads.
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards
- Equestrian use limited to designated trails only
- Avoid locating trails near known paleo/cultural sites except where specifically intended for interpretation

Camping

- Limited to no more than 7 consecutive nights
- Portable toilets are mandatory for overnight dispersed use
- All open fires must be contained in fire pan (no fires rings)
- No wood cutting
- Dispersed camping sites not designated unless monitoring shows unacceptable impacts.

Shooting:

- No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with CDOW regulations

Other

- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Permits

- See Special Recreation Permit Program in Chapter 2

Visual Resources Management

- Class III - along southern boundary adjacent to I-70 corridor
- Not Rated – the remaining portion of this zone

Monitoring Actions:

- Assure objectives are being met and settings are being maintained
- Monitor implemented actions and evaluate A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-15

MACK RIDGE (Zone 5)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in World Class Single – Track Day-Use Mountain Biking recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4= total realization)

Outcomes

Primary Activities
- Single-track day-use mountain biking

Experiences
- Enjoying frequent exercise
- Enjoying strenuous exercise
- Having easier access to a wide range of challenges
- Testing your endurance
- Developing skills, abilities, and self-confidence
- Savoring canyon-country aesthetics

Benefits

Personal:
- Improved physical fitness
- Better health maintenance
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Greater freedom from urban living
- Improved outdoor knowledge, skills, and self-confidence
- Greater aesthetic appreciation

Household & Community:
- Heightened sense of community pride and satisfaction

Economic:
- Greater recognition of Fruita as a desired destination for local and non-locals alike
- Maintenance of gateway community's distinctive recreation-tourism market niche or character
- Increased local tourism revenue
- Reduced health maintenance costs
- Increased local job opportunities

Environmental:
- Increased stewardship and protection of Mack Ridge

Setting Prescriptions

Physical
- *Rural* along the I-70 corridor, w/ improved dirt road and parking facilities; *middle country* on river side. Natural in appearance other than the trails network.

Social
- Group size up to 12
- Expect 15–29 encounters per day after leaving parking facilities

Administrative
- Brochures/maps are available for information
- Regularly monitored by agency representatives
- Rules clearly posted
- Mostly non-motorized and designated as day-use

Figure 2-15 (cont'd)

MACK RIDGE (Zone 5)
Management and Marketing Actions

Management Actions:

Roads and Trails

- Construct trail segment "C" to replace end of dirt road
- Close and restore all non-designated trails
- Modify trails as needed to mitigate impacts
- Close and restore road providing same assess as trail "G"
- Close and restore the end of the road on Steve's Loop
- Close and restore dead-end segment heading south from Hawkeye Road
- Close and restore segment adjacent to dirt road connecting county road to west end of trail
- Close and rehab all non-desig roads not used for admin purposes
- Modify roads as needed to mitigate impacts
- Contain parking facilities to prevent encroachment
- Construct ½ mi. new route to designate Route A as open to travel
- Construct segment E to connect segment A and Mary's Loop
- Construct J between southernmost point of Troy Built and end of Mack Ridge single track
- Construct trail F to connect Mack Ridge Trail to Mack Ridge trailhead
- Consider trail D to connect trail F to Mary's Loop from frontage road and construct only if determined necessary
- Construct trail G from Hawkeye frontage road to gated dirt road
- Provide restrooms at high-use parking areas

Other

- Gate or erect motorized barriers at 9 locations (Figure 2-1)

Marketing Actions:

- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Provide trailhead signs with information regarding challenge level and trail length
- Trailhead sign at Horsethief Bench will recommend clockwise travel for mtn. bikes and counterclockwise travel for equestrian use
- Work with Fruita on recreation-tourism market niche opportunities

MACK RIDGE (Zone 5)	
Administrative and Monitoring Actions	
Administrative Actions: Roads and Trails • Designated uses for existing trails • All motorized/mechanized use limited to specifically designated trails & roads only • Limit equestrian use to designated trails only • Restrict motorized use to road portion of Lion's Loop, to and including access out to Overlook Point, county roads, and designated parking areas Camping • No camping within the Mack Ridge Zone Shooting • No discharge of any projectile (i.e. target shooting) Hunting • Hunting allowed in conformance with CDOW regulations	Other • Designate Mack Ridge area day-use only • Require on-site horse feed to be certified weed-free • All dogs need to be on leash in high-use areas • Dogs under voice control elsewhere Permits • See Special Recreation Permit Program in Chapter 2 Visual Resources Management • Class II – along river corridor • Class III - northeast side of ridge (along frontage road) • Not Rated – areas in between the river and highway influences **Monitoring Actions:** • Assure objectives are being met and prescribed settings are being maintained • Monitor implemented actions and evaluate • A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-16

COLORADO RIVER CORRIDOR (Zone 6)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Overnight flat-water boating for social group and family affiliation in a naturally-appearing red-walled river canyon, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4= total realization)

Outcomes

Primary Activities

- Overnight rafting, canoeing and kayaking
- Associated camping and wilderness hiking

Experiences

- Savoring canyon-country aesthetics
- Enjoying easy access to diverse back country recreation
- Enjoying the closeness of family and friends
- Enjoying exploration
- Escaping everyday responsibilities for a while
- Enjoying mental and physical rest

Benefits

Personal:

- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Greater environmental awareness and sensitivity
- Renewed human spirit
- Greater outdoor knowledge, skills, and self-confidence
- Greater aesthetic appreciation
- More well-informed and responsible visitors

Household & Community:

- Heightened sense of community pride and satisfaction
- Maintained and enhanced group cohesion and family bonding
- Improved functioning of individuals in family and community

Economic:

- Maintenance of gateway community's distinctive recreation-tourism market niche or character
- Positive contributions to local-regional economic stability
- Increased local tourism revenue
- Increased work productivity

Environmental:

- Increased stewardship and protection of River Corridor

Figure 2-16 (cont'd)

COLORADO RIVER CORRIDOR (Zone 6)

Setting Prescriptions

Physical
- North of the river is *middle country* and south of the river is *back country*. The corridor is natural in appearance, although there is a railroad track within the corridor on the north side of the river. The corridor is presently unimproved w/ potential for low key improvements.

Social
- Group size up to 25
- Expect 15–29 encounters per day and eventually in the 30+ range during the peak use times
- There is some evidence of camping along the banks

Administrative
- Brochures are available and information is posted at the launch site. Nothing is available beyond the launch site
- Agency presence and enforcement is randomly present
- Motorized use allowed in concurrence with State regulations

Management and Marketing Actions

Marketing Actions:
- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Provide education/information through sources other than on-site posting
- Explore development of volunteer program with gateway communities/river users to assist with monitoring needs

Administrative and Monitoring Actions

Administrative Actions:

Camping
- No camping on Chow Doggone Island
- Portable toilets are mandatory for overnight dispersed use
- All open fires must be contained in fire pan (no fires rings)
- No wood cutting
- Dispersed camping sites not designated unless monitoring shows unacceptable impacts
- Continue voluntary campsite reservation system at launch site as long as practical

Shooting
- No discharge of any projectile (i.e. target shooting)

Hunting
- Hunting allowed in conformance with CDOW regulations

Permits
- See Special Recreation Permit Program in Chapter 2

Other
- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere
- Travel mgmt. signing must adhere to BLM Colorado Uniform Sign Standards
- Group size is limited to 25 people

Visual Resources Management
- Class I – south of the river
- Class II — north or the river

Monitoring Actions:
- Assure objectives are being met and settings are being maintained
- Monitor implemented actions and evaluate A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-17

BLACK RIDGE CANYONS WEST (Zone 7)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Extreme Wilderness Adventure through Rugged, Deeply-Carved Canyons, Pinnacles, Cliffs, and Slick Rock Creating Limited Access Between Canyons, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4= total realization)

Outcomes

Primary Activities
- Hiking
- Backpacking
- Hunting
- Photography.

Experiences
- Savoring canyon-country aesthetics
- Enjoying strenuous exercise
- Testing your endurance
- Developing skills, abilities, and self-confidence
- Feeling good about solitude and being isolated
- Enjoying primitive and unconfined outdoor recreation environments
- Enjoying exploration

Benefits

Personal:
- Improved physical fitness
- Better health maintenance
- Improved outdoor knowledge, skills, and self-confidence
- Greater overall sense of wellness
- Renewed human spirit
- Greater sensitivity to/awareness of outdoor aesthetics, nature's art and its elegance
- Closer relationship with the natural world

Household & Community:
- Heightened sense of community pride and satisfaction

Environmental:
- Increased stewardship and protection of Wilderness resources
- Greater retention of distinctive natural landscape features

Setting Prescriptions

Physical
- The heart of the area is *primitive* with a relatively undisturbed landscape
- Most of the outer edge is *back country* with a natural appearing landscape and some modifications not readily noticeable

Social
- Group size up to 12
- Expect 0–6 encounters per day within the *primitive* setting and as many as 15 encounters within the *back country* setting

Administrative
- Maps of the Wilderness are available and information is posted outside of the Wilderness at the trailheads, but very little direction is available inside the boundary other than approach trails to allow access into the various canyons.
- Agency presence within this zone is infrequent.

BLACK RIDGE CANYONS WEST (Zone 7)

Management and Marketing Actions

Management Actions:

Roads and Trails

- Modify trails as needed to mitigate resource impacts
- Construct a trail heading north from the Jones Canyon Trailhead if needed to mitigate impacts

Marketing Actions:

- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Collaborate with gateway communities, local agencies and interest groups to promote education, appreciation and land stewardship

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- Motorized/mechanized use prohibited
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards

Camping

- Limited to no more than 14 consecutive nights
- No cutting of dead/live standing vegetation for firewood

Shooting

- No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with DOW regulations

Other

- Group size is limited to 12 people
- Collaborate with FAA to develop advisory flight restrictions
- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Permits

- See Special Recreation Permit Program in Chapter 2

Visual Resources Management

- Class I

Monitoring Actions:

- Assure objectives are being met and setting prescriptions are being maintained
- Monitor implemented actions and evaluate A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Figure 2-18

BLACK RIDGE EAST (Zone 8)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Easy Urban Access to Back Country Settings for Both Day and Overnight Non-Mechanized Wilderness Recreation, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4= total realization)

Outcomes

Primary Activities

- Hiking
- Horseback Riding
- Running
- Backpacking

Experiences

- Escaping everyday responsibilities for awhile
- Enjoying frequent exercise
- Enjoying strenuous exercise
- Developing skills, abilities, and self-confidence
- Savoring canyon-country aesthetics
- Releasing or reducing some built-up mental tensions
- Discovering joy in interacting with others in outdoor settings

Benefits

Personal:

- Greater freedom from urban living
- Renewed human spirit
- Improved physical fitness
- Better health maintenance
- Restored mind from unwanted stress
- Improved outdoor knowledge, skills, and self-confidence
- Greater cultivation of outdoor-oriented lifestyle
- Improved understanding of how involvement with others in natural resource settings builds character

Household & Community:

- Heightened sense of community pride and satisfaction
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle
- Reduced numbers of at-risk youth
- Reduced juvenile delinquency
- Improved community integration

Economic:

- Increased desirability as a place to live/retire
- Reduced health maintenance costs
- Increased property values

Environmental:

- Increased stewardship and protection of Wilderness Resources

Figure 2-18 (cont'd)

BLACK RIDGE EAST (Zone 8)

Setting Prescriptions

Physical
- *Backcountry* with *middle country* around the perimeter due to roads outside of the zone boundary. The area is natural in appearance and basically undisturbed other than a few subtle modifications in the form of low key trails.

Social
- Group size up to 12
- Expect 3–6 encounters per day within the interior and as many as 15 encounters around the perimeter where the designated trails are located

Administrative
- Brochures are available and information is posted outside of the Wilderness at the trailheads, but very little direction is available inside the boundary Agency presence within this zone is infrequent.
- No mechanized use

Management and Marketing Actions

Management Actions:

Roads and Trails
- Modify trails as needed to mitigate resource impacts
- Remove existing fences that no longer serve a purpose

Marketing Actions:
- Develop comprehensive interpretive plan which includes all aspects of interpretation, education, and public outreach
- Collaborate with gateway communities, local agencies and interest groups to promote, appreciation and land stewardship

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails
- Motorized/mechanized use prohibited
- No wilderness access routes will be developed from the Kings View Road beyond the Pollock Bench Trailhead
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards

Camping
- Limited to no more than 14 consecutive nights
- No cutting of dead/live standing vegetation for firewood

Shooting
- No discharge of any projectile (i.e. target shooting)

Hunting
- Hunting allowed in conformance with DOW regulations

Permits
- See Special Recreation Permit Program in Chapter 2

Other
- Group size is limited to 12 people
- Work with Colorado National Monument to promote seamless management and trail connectivity
- Collaborate with FAA to develop advisory flight restrictions
- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Visual Resources Management
- Class I
- Class II – small section along eastern boundary

Monitoring Actions:
- Assure objectives are being met and setting prescriptions are being maintained
- Monitor implemented actions and evaluate A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management.

Figure 2-19

URBAN - WILDERNESS INTERFACE (Zone 9)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to engage in Day-Use Foot and Horse-Only Recreation in an Urban Back-Yard Setting Abutting the Wilderness, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization)

Outcomes

Primary Activities
- Hiking
- Horseback Riding
- Dog Walking
- Running

Experiences
- Enjoying having access to close-to-home outdoor amenities
- Escaping everyday responsibilities for awhile
- Enjoying frequent exercise
- Seeing visitors get excited about the area
- Releasing or reducing some built-up mental tensions
- Enjoying the closeness of family and friends

Benefits

Personal:
- Improved understanding of rural-urban interface
- Maintained ability to take a quick canyon-country excursion
- Improved physical fitness
- Better health maintenance
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Increased personal enrichment from helping others develop greater awareness, learning, and appreciation the area
- Greater personal enrichment through involvement with others

Household & Community:
- Heightened sense of community pride and satisfaction
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle
- Enlarged sense of community dependency on public lands

Economic:
- Increased desirability as a place to live or retire
- Positive contributions to local economic stability
- Reduced health maintenance costs
- Increased property values

Environmental:
- Increased stewardship and protection of the urban-Wilderness interface
- Greater community ownership and stewardship of recreation and natural resources
- Improved respect for privately owned lands

Figure 2-19 (cont'd)

URBAN - WILDERNESS INTERFACE (Zone 9)

Setting Prescriptions

Physical

- *Front country* along the urban interface to the east, turning to *middle country* to the west as this zone approaches the Wilderness boundary
- The landscape is modified with an access road, trailhead/parking facilities and a number of trails, but naturalness is still not overpowered

Social

- Group size up to 25 people
- Could encounter up to 30 individuals/groups per day

Administrative

- Brochures/maps are available for information and opportunities
- Monitored by agency representatives periodically
- Rules clearly posted
- Easy access with 2-wheel drive, although trails are non-motorized/non-mechanized

Management and Marketing Actions

Management Actions:

Roads and Trails

- Modify trails as needed to mitigate resource impacts
- Construct restrooms at trailheads only when needed
- Contain parking facilities to prevent encroachment
- Provide hiking and equestrian opportunities in the Opal Hill vicinity

Other

- Remove existing fences that no longer serve a purpose
- Implement methods to deal with dog waste in high-use areas when the need arises

Marketing Actions:

- Work with the City of Fruita in management of Snooks Bottom, trail connectivity and other gateway community projects.
- Work/collaborate closely with the urban interface community in this zone (existing and future expansion).
- Work with local schools to foster an appreciation for natural resources
- Educational materials will include information regarding private property and designated use for various parking facilities
- Work with Colorado National Monument to promote seamless management, consistency and trail connectivity

Figure 2-19 (cont'd)

URBAN - WILDERNESS INTERFACE (Zone 9)

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- Motorized/mechanized use prohibited on the Pollock Bench and Devil's Canyon Trail systems
- No wilderness access routes will be developed from the Kings View Road beyond the Pollock Bench Trailhead
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards

Camping

- Limited to no more than 14 consecutive nights
- The Pollock Canyon, Devils Canyon and Kodel's Canyon trail system, including trailheads, will be designated for day-use only, with fires, camping and nighttime use prohibited from the CCNCA boundary to the Wilderness boundary.

Shooting

- No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with CDOW regulations

Other

- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere

Permits

- See Special Recreation Permit Program in Chapter 2

Visual Resources Management

- Class II

Monitoring Actions:

- Assure objectives are being met and setting prescriptions are being maintained
- Monitor implemented actions and evaluate
- Monitor implemented actions and evaluate. A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management.

Figure 2-20

RATTLESNAKE—MEE CANYONS ACCESS (Zone 10)	
Management Objectives	By the year 2010, manage this zone to provide opportunities for visitors to Hike to a Cluster of Remote Natural Arches and Slick Rock Canyons from a Rugged, Unimproved Road, providing no less than 75% of responding visitors and affected community residents at least a "moderate" realization of these benefits (i.e., 3.0 on a probability scale where 1=not at all, 2=somewhat, 3=moderate, 4=total realization)

Outcomes

Primary Activities

- Viewing the Arches
- Day-Use Hiking
- Limited, Designated Camping Near Vehicles Along Hunter Access Road

Experiences

- Enjoying exploration of the arches and canyons
- Savoring canyon-country aesthetics
- Enjoying artistic expression of nature
- Releasing or reducing some built-up mental tensions
- Feeling good about solitude and being isolated
- Enjoying the night on the rim for easier canyon access

Benefits

Personal:

- Increased capacity for artistic expression
- Renewed human spirit
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Continued freedom of access to this remote yet undeveloped attraction
- Greater freedom from urban living
- Enhanced sense of place ethic
- Greater overall sense of wellness

Household & Community:

- Heightened sense of community pride and satisfaction
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle
- Greater community appreciation of nature art

Economic:

- Maintenance of gateway community's distinctive recreation-tourism market niche or character
- Greater recognition of gateway communities as a desired destination for local and non-locals alike
- Increased local tourism revenue

Environmental:

- Increased stewardship and protection of the Arches and Canyons
- Maintenance of the distinctive, undeveloped character of rugged, improved access road

Figure 2-20 (cont'd)

RATTLESNAKE—MEE CANYONS ACCESS (Zone 10)

Setting Prescriptions

Physical
- *Back country* in the Mee Canyon portion of this zone
- *Middle country* in the remaining portion of this zone, tending toward *front country*
- Although the area includes a number of dirt access roads and trailhead/parking facilities, the landscape still maintains a natural appearance

Social
- Group size up to 25 people outside of the Wilderness boundary and up to 12 people within the Wilderness
- Expect to encounter 15 to 29 individuals/groups if visiting the Arches and 30+ encounters outside of the Wilderness

Administrative
- Brochures/maps are available for information and opportunities
- Monitored by agency representatives periodically
- Rules clearly posted
- Mostly 4-wheel drive access or high clearance
- Motorized access restricted during heavy precipitation

Management and Marketing Actions

Management Actions:

Roads and Trails
- Modify trails as needed to mitigate resource impacts
- Construct restrooms at trailheads only when needed
- Contain parking facilities to prevent encroachment
- Close and restore all non-designated roads not used for administrative purposes
- Designate spur roads A, B, C, F, G, H & I and contain to prevent lengthening
- Close spur roads D & E and restore
- Develop an area for horse trailer parking at the end of spur C
- Post information regarding road conditions and closures for the Upper and Lower Black Ridge roads
- Construct a trail heading north from the Jones Canyon Trailhead if needed to mitigate impacts
- Develop an alternate Mee Canyon Trailhead at the intersection of the Upper and Lower Black Ridge access roads
- Maintain roads at current level (do not improve access)
- Develop a parking area at the sagebrush flat on the Lower Black Ridge Road just before the intersection with the upper road
- Improve turnaround at the end of cherry-stemmed road
- Move Knowles Canyon Trailhead to spur road F and increase parking capacity
- Modify roads as needed to mitigate resource impacts

Other
- Remove existing fences that no longer serve a purpose

Marketing Actions:
- Develop comprehensive interpretive plan which includes all aspects of interpretation, education and public outreach
- Collaborate with gateway communities, local agencies and interest groups to promote education, appreciation and land stewardship

Figure 2-20 (cont'd)

RATTLESNAKE—MEE CANYONS ACCESS (Zone 10)

Administrative and Monitoring Actions

Administrative Actions:

Roads and Trails

- Motorized/mechanized use prohibited within the Wilderness boundary
- Motorized/mechanized use is limited to roads and trails so designated
- Allow motorized vehicle use on Upper Black Ridge Road from Easter Weekend to August 15 only
- Allow motorized vehicle use on Lower Black Ridge Road from August 15 to February 15 only
- Designate the acquired "Gore Parcel" as non-motorized/non-mechanized except for administrative use
- Other than administrative use, the dirt road west of the yellow gate on BS Road is designated non-motorized/non-mechanized
- Allow for spot gravelling on BS Road as needed for maintenance
- Allow parking on flat rock surface area south of BS road and southwest of the Knowles Canyon Trailhead
- Allow parking along the cherry-stemmed road, but only where designated
- Do not encourage ATV use in this area
- Travel management signage must adhere to BLM Colorado Uniform Sign Standards

Other

- All dogs need to be on leash in high-use areas
- Dogs under voice control elsewhere
- Collaborate with FAA to develop advisory flight restrictions

Permits

- See Special Recreation Permit Program in Chapter 2

Camping

- Limited to no more than 14 consecutive nights
- Dispersed camping is limited to designated sites
- The cherry-stemmed access road, the Arches Trailhead and the vicinity around the Arches trails is all designated as day-use only (no camping)
- If future demand dictates a campground in this zone, proposed locations include the intersection of the Upper Black Ridge Road and the Mee Canyon access road or the sagebrush flat on the Lower Black Ridge Road
- No cutting of dead/live standing vegetation for firewood
- Woodcutting or gathering is limited to areas where chaining has occurred
- Portable toilets are mandatory for overnight dispersed use.
- All open fires must be contained in fire pan (no fires rings)

Shooting

- No discharge of any projectile (i.e. target shooting)

Hunting

- Hunting allowed in conformance with CDOW regulations

Visual Resources Management

- Class I – within the Wilderness boundary
- Not Rated – area outside of Wilderness

Monitoring Actions:

- Assure objectives are being met and setting prescriptions are being maintained
- Monitor implemented actions and evaluate
- A mandatory, no-fee, self-registration system will be implemented for the entire CCNCA by January 1, 2010 to contribute data on visitor use, group size, and other trends to support adaptive management of the CCNCA.

Recreation Permit Program

Various recreational uses that occur within the CCNCA require a Special Recreation Permit (SRP). These activities include commercial use, competitive use, vending, organized group activity and event use, and special use areas.

Commercial Use involves an individual or organization providing recreational opportunities that are business related or involve financial gain. Scientific, educational and therapeutic institutions, as well as non-profit organizations, may still fall under this category.

Competitive Use refers to events/activities that include an element of competition.

Vending permits are temporary authorizations to sell goods or services on public lands and are usually in conjunction with a recreation activity.

Organized Group Activity and Event Use may require an SRP, even if not commercial or competitive in nature. The BLM Authorizing Officer determines when an SRP is needed based on resource concerns, user conflicts, public health and safety, and other factors. The Authorizing Officer may elect to issue a **Use Authorization,** which includes stipulations for use but is simple to process and does not require a fee.

Special Area Use permits may be required for individual (private, non-commercial) use in specially designated areas, including National Conservation Areas. This plan does not initially require Special Area Use permits for any locations within CCNCA, but the option remains available if needed as an adaptive management tool to manage impacts of increasing future use. If there is any question whether or not a proposed activity on public lands falls within one of the above categories, the BLM office will be contacted for additional information.

The following information is pertinent to the CCNCA SRP program:

Commercial SRPs are issued based on an annual schedule. Applications must be submitted by a specified date to be considered for issuance during that year's process. Renewals are processed via the same schedule, although some SRPs are multi-year. First-time permits are issued annually on a probationary term for the first two years. If operation is acceptable and remains in compliance with contract stipulations, an SRP may be reissued for up to ten years at the discretion of the Authorizing Officer. All commercial SRPs are reviewed on an annual basis and require all fees paid and post-use information submitted as part of the review process.

Non-commercial SRPs require a minimum of 180 days for processing in advance of the first intended use date unless a shorter time is authorized by the Field Manager/Authorizing Officer having jurisdiction over the public lands to be used.

Issuance of an SRP and acceptance of the proposed date(s) of use are not guaranteed and should not be assumed, until confirmed by the Authorizing Officer.

Proposed activities must be consistent with the recreation sub-zone and settings in which the activity will take place. Zones 1 – 10 are discussed in this chapter.

Limits may be set for the following as carrying capacities are determined for ROS zones through monitoring of the physical and social settings:

- Group size for commercial operations
- The number of participants allowed for competitive or organized group use events
- The number of active commercial SRPs for various uses
- The number of competitive or organized group event SRPs issued in an ROS zone per year (or other specified timeframe)

Permits will not be granted for air tours over CCNCA.

Permits will not be granted to conduct competitive motorized events within CCNCA.

Restrictions may be stipulated for commercial SRP operation or issuance of non-commercial SRPs, based on high-use periods such as holidays and weekends during active seasonal-use periods, or due to resource concerns related to wildlife, calving season for active grazing allotments (January-February), weather-related concerns, and other situations where resource impacts become a concern.

Temporary closure (either full or partial) of an area may be executed for all use not associated with a permitted event to promote health and safety concerns, to enhance resource protection and/or due to other factors deemed necessary by the Authorizing Officer.

Special Recreation Permits are issued at the discretion of the Field Manager, who may at any time and without prior notice, choose not to issue permits for certain activities or use areas. Such decisions could be based on a variety of factors such as planning decisions, potential resource impacts, existing outfitters in the same area, overcrowding, past poor performance, and other concerns.

Regulations for Specific Locations within CCNCA

Colorado River

The moratorium for issuing commercial SRPs for guided river tours will continue until an acceptable carrying capacity is determined.

Rabbit Valley

- Permits will not be granted for competitive motorized events.

Mack Ridge

- No more than 4 full-time commercial bike permits will be allowed at any one time. If the existing number exceeds this when the RMP is validated, vacated permits will not be re-issued until there are less than 4 valid permits in operation.

- Each full-time commercial bike permit is limited to no more than 15 participants (clients + guides) on the trail system at any one time, and no individual groups in excess of 12 participants.
- Commercial permits for equestrian use will not be granted for Mack Ridge.
- Competitive events permitted in Mack Ridge will be limited to walking/running.
- Equestrian group-use events are limited to week-days only.
- Events with more than 50 participants are limited to 1 event per month, plus 2 additional (14 total), with no more than 2 events occurring in a single month.

General Guidance for Evaluating Group-Use Proposals

The following matrix is a quick initial evaluation that could be used for group-use proposals that are not commercial or competitive in nature. The matrix shows the decision-making process that will be used to determine if a special recreation permit will be required.

Action	Group-Use Guideline Example			
	Wilderness	River Corridor	North of River	
			Day Use	Overnight
Group Size Where No Authorization Required	12 or Less	25 or Less	25 or less	15 or Less
Group Size Requiring Use Authorization	12 – 25	25 – 35	25 – 35	15 – 45
Group Size Requiring Special Recreation Permitted	More than 25	More Than 35	More Than 35	More Than 45

Permit policy is subject to change on an annual basis, so the direction included in this document is general in nature or discusses aspects of the program that are constant. More detailed information can be found in the Code of Federal Regulations, BLM Manual & Handbook H-2930-1 Recreation Permit Administration, and the Special Recreation Permit Handbook for Colorado, which is updated annually. For information specific to CCNCA, or to apply for an SRP, visit or contact the BLM Grand Junction Field Office.

Visual Resources

All actions proposed in the CCNCA will be planned and implemented to meet the objectives for Visual Resource Management (VRM) for the VRM classes depicted on Figure 3-16 and described in section 3.18.1, Visual Resource Management System, of Chapter3.18, Visual Resources.

Fire Management

Current management direction will continue to be implemented based on the Grand Junction Field Office Fire Management Plan (FMP) (BLM 2004). A new FMP is in development and will supercede the existing FMP once finalized.

Hazardous Materials

Hazardous materials incidents within the CCNCA will be prevented and risks associated with the hazardous materials will be reduced.

Law Enforcement, Patrols and Public Safety

Law enforcement activities will be conducted as described in the Grand Junction Field Office Law Enforcement Plan (BLM 2004). Information and education regarding BLM resource management and regulations will be distributed by BLM law enforcement rangers and park rangers as part of regular visitor contact activities. Efforts to identify opportunities to enhance education, interpretation and visitor contact occurrences using volunteer organizations and partnerships will be sought out.

2.3 Public Involvement in Implementation

Partnerships

Throughout the development of the CCNCA RMP the importance of creating partnerships in the management of the CCNCA was recognized. The following groups are potential stakeholders in the CCNCA and will prove to be valuable partners in the future implementation of the CCNCA RMP:

Colorado National Monument

Concurrent with the development of the Colorado Canyons National Conservation Area Resource Management Plan, the National Park Service has been preparing a General Management Plan for the Colorado National Monument (COLM).). The two areas share a common boundary and the agencies have collaborated throughout their respective planning process to advance an integrated management approach. Specific actions toward this end have been identified in this RMP – requesting dogs be leashed on

connecting trails, identifying potential locations for trail heads near the City of Fruita and the DS Road/COLMCOLM for access to joint trails on Black Ridge.

In addition, the two agencies have identified the following opportunities that provide potential for future collaboration and foster an ecosystem approach to management:

- Vegetation restoration and reclamation projects and integrated weed management issues, to ensure COLM concerns are addressed in projects that may have a direct impact on their own initiatives.

- Working together on habitat management in cooperation with F& WS and CDOW.

- Consultation on grazing management decisions, especially in the case of relinquished or canceled allotments bordering the COLM.

- The pursuit of providing cooperative information and education in the vicinity of CCNCA and COLM, especially along the length of connecting trails or other areas where complementary visitor recreation management is possible.

- COLM support of identifying locations for trail heads near the City of Fruita and for access to joint trails on Black Ridge.

The National Park Service, with the assistance of the BLM, developed a detailed list of issues, commonalities, and differences that serve as areas of potential cooperative management between the two agencies.

The City of Fruita

Because of its proximity to the CCNCA, the City of Fruita and the CCNCACCNCA have great potential for working together in the future as the CCNCA RMP is implemented. The CCNCA could provide a significant socioeconomic benefit to the community and, through its community planning and development, Fruita is striving to expand its role as the CCNCA Gateway Community. With the continuing goal of consistent management at the urban interface, the City of Fruita and the BLM have identified the following opportunities for future collaboration and partnerships:

- Cooperative management of the 111-acre property along the Colorado River and adjacent to the CCNCA purchased by the City of Fruita in 2004. This urban interface area, known as Snooks Bottom, can be managed as an open space resource and has potential for trail connections into the CCNCA.

- Work with the City of Fruita and other appropriate agencies, including the Colorado National Monument, to identify access corridors, trailhead opportunities and buffer strips as development gets closer to BLM land.

- Work with the city and county on improvement and maintenance of access roads, including the Kingsview road.

- Identify opportunities for intergovernmental partnerships and develop agreements formalizing relationships among agencies.

- Work with City of Fruita, Colorado State Parks, the Colorado Division of Wildlife, the Colorado Riverfront Commission and other appropriate groups and agencies on new cooperative river management agreements, including opportunities at the Loma Boat Launch and Colorado River State Park, Horse Thief Ranch to identify future opportunities for river access, parking, and possible trailheads.

- Work with City of Fruita on continuing education, interpretation, protection and management the significant of paleontological resources in the area of the urban interface.

Colorado Division of Wildlife

The Colorado Division of Wildlife (CDOW), through the Colorado Department of Natural Resources (DNR), is an official cooperating agency with the BLM in the development of the CCNCA RMP. The PRMP recognizes CDOW's responsibility to manage wildlife on BLM-managed lands. The BLM will consult CDOW in establishing policy for the purposes of protecting public safety, administration, and public use and enjoyment.

Cooperative management of the Loma Boat Launch, bighorn sheep herd management, and implementation of the Gunnison Sage Grouse Conservation Strategy are examples of current issues being addressed in partnership. Continuing cooperation between the two agencies in all areas of wildlife management, habitat monitoring, and information cross-feed will benefit both agencies into the future.

Old Spanish Trail

In 2002 Congress authorized the Old Spanish National Historic Trail (OSNHT) as a trail that follows a route of historical significance. The OSNHT was an equestrian pack trail used to transport trade goods and livestock between Santa Fe and Los Angeles between 1829 and 1848. Explorer John C. Fremont cited this trail to be the "longest, crookedest, most arduous pack mule route in the history of America."

A significant stretch of the Northern Route of the OSNHT follows Interstate 70 from the city of Grand Junction, through the CCNCA, eventually joining the North Branch of the Trail near Green River, UT. Joint administration of the trail was granted to the BLM and the National Park Service (NPS). The NPS and the BLM also share responsibility for developing a Comprehensive Management Plan (CMP) for the OSNHT. The Old Spanish Trail Association is partnering with NPS and BLM, providing a ready avenue for public input on trail-related issues and strategies.

A preparation plan for the OSNT is being developed by the NPS in 2004 as the BLM begins public scoping for its portion of the CMP. The CCNCA will have many

opportunities to be involved in the planning and subsequent implementation of the OSNT CMP. Some of the opportunities will include:

- Information cross feed with NPS, Old Spanish Trail Association and other participants
- Interpretation and education
- Public involvement
- Possible additional trail segments
- Recreational activities – hiking, horseback riding

Other Interested Parties

Other stakeholders in the future management of the CCNCA with great potential for involvement in partnerships, a Friends Group, and volunteer corps are:

The Colorado Canyons NCA Advisory Committee
U.S. Fish and Wildlife Service
Bureau of Reclamation
Colorado State Parks
Museum of Western Colorado
Native American communities
Local communities
Working group members from all four zones
Environmental organizations
Dinosaur Diamond Scenic Byway
Old Spanish Trail Association
Interest groups and organizations
Private landowners
Pollock Canyon Estates Homeowners Association
Local users
Local businesses
Visitor and Convention Bureau

2.4 Management Plan Implementation, Evaluation and Adaptive Management

RMP Implementation

Public involvement in plan implementation decisions is discussed in the "Implementation Decisions" section on page 2. In addition, the CCNCA is working on developing an implementation strategy or "business plan", that would allow further opportunities for public involvement in determining what portions of the CCNCA RMP should be highest priority for future implementation. Public involvement, in coordination with the CCNCA Advisory Council, will be a key factor in developing the business and implementation plan. Further details may become available in the near future.

APPENDIX 1

Colorado Canyons National Conservation Area
And Black Ridge Canyons Wilderness Act of 2000

Mee Canyon

COLORADO CANYONS NATIONAL CONSERVATION AREA AND BLACK RIDGE

CANYONS WILDERNESS ACT OF 2000

Public Law 106-353 106th Congress

An Act

To establish the Colorado Canyons National Conservation Area and the Black Ridge Canyons Wilderness, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled

SECTION 1. SHORT TITLE.

This Act may be cited as the "Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000".

SEC. 2. FINDINGS AND PURPOSE.

(a) Findings.__Congress finds that certain areas located in the Grand Valley in Mesa County, Colorado, and Grand County, Utah, should be protected and enhanced for the benefit and enjoyment of present and future generations. These areas include the following:

(1) The areas making up the Black Ridge and Ruby Canyons of the Grand Valley and Rabbit Valley, which contain unique and valuable scenic, recreational, multiple use opportunities (including grazing), paleontological, natural, and wildlife components enhanced by the rural western setting of the area, provide extensive opportunities for recreational activities, and are publicly used for hiking, camping, and grazing, and are worthy of additional protection as a national conservation area.

(2) The Black Ridge Canyons Wilderness Study Area has wilderness value and offers unique geological, paleontological, scientific, and recreational resources.

(b) Purpose.__The purpose of this Act is to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the unique and nationally important values of the public lands described in section 4(b), including geological, cultural, paleontological, natural, scientific, recreational, environmental, biological, wilderness, wildlife education, and scenic resources of such public lands, by establishing the Colorado Canyons National Conservation Area and the Black Ridge Canyons Wilderness in the State of Colorado and the State of Utah.

SEC. 3. DEFINITIONS.

In this Act:

(1) Conservation area.__The term "Conservation Area" means the Colorado Canyons National Conservation Area established by section 4(a).
(2) Council.__The term "Council" means the Colorado Canyons National Conservation Area Advisory Council established under section 8.
(3) Management plan.__The term "management plan" means the management plan developed for the Conservation Area under section 6(h).
(4) Map.__The term "Map" means the map entitled "Proposed Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Area" and dated July 18, 2000.
(5) Secretary.__The term "Secretary" means the Secretary of the Interior, acting through the Director of the Bureau of Land Management.
(6) Wilderness.__The term "Wilderness" means the Black Ridge Canyons Wilderness so designated in section 5.

SEC. 4. COLORADO CANYONS NATIONAL CONSERVATION AREA.

(a) In General.__There is established the Colorado Canyons National Conservation Area in the State of Colorado and the State of Utah.
(b) Areas Included.__The Conservation Area shall consist of approximately 122,300 acres of public land as generally depicted on the Map.

SEC. 5. BLACK RIDGE CANYONS WILDERNESS DESIGNATION.

Certain lands in Mesa County, Colorado, and Grand County, Utah, which comprise approximately 75,550 acres as generally depicted on the Map, are hereby designated as wilderness and therefore as a component of the National Wilderness Preservation System. Such component shall be known as the Black Ridge Canyons Wilderness.

SEC. 6. MANAGEMENT.

(a) Conservation Area.__The Secretary shall manage the Conservation Area in a manner that__

(1) conserves, protects, and enhances the resources of the Conservation Area specified in section 2(b); and

(2) is in accordance with__
(A) the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.); and
(B) other applicable law, including this Act.

(b) Uses.__The Secretary shall allow only such uses of the Conservation Area as the Secretary determines will further the purposes for which the Conservation Area is established.

(c) Withdrawals.__Subject to valid existing rights, all Federal land within the Conservation Area and the Wilderness and all land and interests in land acquired for the Conservation Area or the Wilderness by the United States are withdrawn from__
(1) all forms of entry, appropriation, or disposal under the public land laws;
(2) location, entry, and patent under the mining laws; and
(3) the operation of the mineral leasing, mineral materials, and geothermal leasing laws, and all amendments thereto.
Nothing in this subsection shall be construed to affect discretionary authority of the Secretary under other Federal laws to grant, issue, or renew rights-of-way or other land use authorizations consistent with the other provisions of this Act.

(d) Off-Highway Vehicle Use.__

(1) In general__Except as provided in paragraph (2), use of motorized vehicles in the Conservation Area__
(A) before the effective date of a management plan under subsection (h), shall be allowed only on roads and trails designated for use of motor vehicles in the management plan that applies on the date of the enactment of this Act to the public lands in the Conservation Area; and
(B) after the effective date of a management plan under subsection (h), shall be allowed only on roads and trails designated for use of motor vehicles in that management plan.
(2) Administrative and emergency response use.__Paragraph (1) shall not limit the use of motor vehicles in the Conservation Area as needed for administrative purposes or to respond to an emergency.

(e) Wilderness.__Subject to valid existing rights, lands designated as wilderness by this Act shall be managed by the Secretary, as appropriate, in accordance with the Wilderness Act (16 U.S.C. 1131 et seq.) and this Act, except that, with respect to any wilderness areas designated by this Act, any reference in the Wilderness Act to the effective date of the Wilderness Act shall be deemed to be a reference to the date of the enactment of this Act.

(f) Hunting, Trapping, and Fishing.__

(1) In general.__Hunting, trapping, and fishing shall be allowed within the Conservation Area and the Wilderness in accordance with applicable laws and regulations of the United States and the States of Colorado and Utah.
(2) Area and time closures.__The head of the Colorado Division of Wildlife (in reference to land within the State of Colorado), the head of the Utah Division of Wildlife (in reference to land within the State of Utah), or the Secretary after consultation with the Colorado Division of Wildlife (in reference to land within the State of Colorado) or the head of the Utah Division of Wildlife (in reference to land within the State of Utah), may issue regulations designating zones where, and establishing limited periods when, hunting, trapping, or fishing shall be prohibited in the Conservation Area or the Wilderness for reasons of public safety, administration, or public use and enjoyment.

(g) Grazing.__

(1) In general.__Except as provided by paragraph (2), the Secretary shall issue and administer any grazing leases or permits in the Conservation Area and the Wilderness in
accordance with the same laws (including regulations) and Executive orders followed by the Secretary in issuing and administering grazing leases and permits on other land under the jurisdiction of the Bureau of Land Management.
(2) Grazing in wilderness.__Grazing of livestock in the Wilderness shall be administered in accordance with the provisions of section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)), in accordance with the guidelines set forth in Appendix A of House Report 101-405 of the 101st Congress.

(h) Management Plan.__

(1) In general.__Not later than 3 years after the date of the enactment of this Act, the Secretary shall develop a comprehensive management plan for the long-range protection and management of the Conservation Area and the Wilderness and the lands described in paragraph (2)(E).
(2) Purposes.__The management plan shall__
(A) describe the appropriate uses and management of the Conservation Area and the Wilderness;
(B) take into consideration any information
developed in studies of the,land within the Conservation Area or the Wilderness;
(C) provide for the continued management of the utility corridor, Black Ridge Communications Site, and the Federal Aviation Administration site as such for the land designated on the Map as utility corridor, Black Ridge Communications Site, and the Federal Aviation Administration site;
(D) take into consideration the historical involvement of the local community in the interpretation and protection of the resources of the Conservation Area and the Wilderness, as well as the Ruby Canyon/Black Ridge Integrated Resource Management Plan, dated March 1998, which

was the result of collaborative efforts on the part of the Bureau of Land Management and the local community; and
(E) include all public lands between the boundary of the Conservation Area and the edge of the Colorado River and, on such lands, the Secretary shall allow only such recreational or other uses as are consistent with this Act.

(i) No Buffer Zones.__The Congress does not intend for the establishment of the Conservation Area or the Wilderness to lead to the creation of protective perimeters or buffer zones around the Conservation Area or the Wilderness. The fact that there may be activities or uses on lands outside the Conservation Area or the Wilderness that would not be allowed in the Conservation Area or the Wilderness shall not preclude such activities or uses on such lands up to the boundary of the Conservation Area or the Wilderness consistent with other applicable laws.

(j) Acquisition of Land.__

(1) In general.__The Secretary may acquire non_federally owned land within the exterior boundaries of the Conservation Area or the Wilderness only through purchase from a willing seller, exchange, or donation.
(2) Management.__Land acquired under paragraph (1) shall be managed as part of the Conservation Area or the Wilderness, as the case may be, in accordance with this Act.

(k) Interpretive Facilities or Sites.__The Secretary may establish minimal interpretive facilities or sites in cooperation with other public or private entities as the Secretary considers appropriate. Any facilities or sites shall be designed to protect the resources referred to in section 2(b).
(1) Water Rights.__

(1) Findings.__Congress finds that__

(A) the lands designated as wilderness by this Act are located at the headwaters of the streams and rivers on those lands, with few, if any, actual or proposed water resource facilities located upstream from such lands and few, if any, opportunities for diversion, storage, or other uses of water occurring outside such lands that would adversely affect the wilderness or other values of such lands;
(B) the lands designated as wilderness by this Act generally are not suitable for use for development of new water resource facilities, or for the expansion of existing facilities;
(C) it is possible to provide for proper management and protection of the wilderness and other values of such lands in ways different from those utilized in
other legislation designating as wilderness lands not sharing the attributes of the lands designated as wilderness by this Act.

(2) Statutory construction.__

(A) Nothing in this Act shall constitute or be construed to constitute either an express or implied reservation of any water or water rights with respect to the lands designated as a national conservation area or as wilderness by this Act.
(B) Nothing in this Act shall affect any conditional or absolute water rights in the State of Colorado existing on the date of the enactment of this Act.
(C) Nothing in this subsection shall be construed as establishing a precedent with regard to any future national conservation area or wilderness designations.
(D) Nothing in this Act shall be construed as limiting, altering, modifying, or amending any of the interstate compacts or equitable apportionment decrees that apportion water among and between the State of Colorado and other States.

(3) Colorado water law.__The Secretary shall follow the procedural and substantive requirements of the law of the State of Colorado in order to obtain and hold any new water rights with respect to the Conservation Area and the Wilderness.

(4) New projects.__

(A) As used in this paragraph, the term "water resource facility" means irrigation and pumping facilities, reservoirs, water conservation works, aqueducts, canals, ditches, pipelines, wells, hydropower projects, and transmission and other ancillary facilities, and other water diversion, storage, and carriage structures. Such term does not include any such facilities related to or used for the purpose of livestock grazing.
(B) Except as otherwise provided by section 6(g) or other provisions of this Act, on and after the date of the enactment of this Act, neither the President nor any other officer, employee, or agent of the United States shall fund, assist, authorize, or issue a license or permit for the development of any new water resource facility within the wilderness area designated by this Act.
(C) Except as provided in this paragraph, nothing in this Act shall be construed to affect or limit the use, operation, maintenance, repair, modification, or replacement of water resource facilities in existence on the date of the enactment of this Act within the boundaries of the Wilderness.

(5) Boundaries along Colorado River.__

(A) Neither the Conservation Area nor the Wilderness shall include any part of the Colorado River to the 100-year high water mark.
(B) Nothing in this Act shall affect the authority that the Secretary may or may not have to manage recreational uses on the Colorado River, except as such authority may be affected by compliance with paragraph (3). Nothing in this Act shall be construed to affect the authority of the Secretary to manage the public lands between the boundary of the Conservation Area and the edge of the Colorado River.
(C) Subject to valid existing rights, all lands owned by the Federal Government between the 100-year high water mark on each shore of the Colorado River, as designated on the Map from the line labeled "Line A" on the east to the boundary between the States of Colorado and Utah on the West, are hereby withdrawn from__

(i) all forms of entry, appropriation, or disposal under the public land laws;
(ii) location, entry, and patent under the mining laws; and
(iii) the operation of the mineral leasing, mineral materials, and geothermal leasing laws.

SEC. 7. MAPS AND LEGAL DESCRIPTIONS.

(a) In General.__As soon as practicable after the date of the enactment of this Act, the Secretary shall submit to Congress a copy of the Map and a legal description of the Conservation Area and of the Wilderness.

(b) Force and Effect.__The Map and legal descriptions shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in the Map and the legal descriptions. (c) Public Availability.__Copies of the Map and the legal descriptions shall be on file and available for public inspection in__ (1) the Office of the Director of the Bureau of Land Management;

(2) the Grand Junction District Office of the Bureau of Land Management in Colorado;
(3) the appropriate office of the Bureau of Land Management in Colorado, if the Grand Junction District Office is not deemed the appropriate office; and
(4) the appropriate office of the Bureau of Land Management in Utah.

(d) Map Controlling.__Subject to section 6(l)(3), in the case of a discrepancy between the Map and the descriptions, the Map shall control.

SEC. 8. ADVISORY COUNCIL.

(a)Establishment.__Not later than 6 months after the date of the enactment of this Act, the Secretary shall establish an advisory council to be known as the "Colorado Canyons National Conservation Area Advisory Council".

(b) Duty.__The Council shall advise the Secretary with respect to preparation and implementation of the management plan, including budgetary matters, for the Conservation Area and the Wilderness.

(c) Applicable Law.__The Council shall be subject to__

(1) the Federal Advisory Committee Act (5 U.S.C. App.); and

(2) the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.).

(d) Members.__The Council shall consist of 10 members to be appointed by the Secretary including, to the extent practicable:

(1) A member of or nominated by the Mesa County Commission.

(2) A member nominated by the permittees holding grazing allotments within the Conservation Area or the Wilderness.

(3) A member of or nominated by the Northwest Resource Advisory Council.

(4) Seven members residing in, or within reasonable proximity to, Mesa County, Colorado, with recognized backgrounds reflecting__

(A) the purposes for which the Conservation Area or Wilderness was established; and

(B) the interests of the stakeholders that are affected by the planning and management of the Conservation Area and the Wilderness.

SEC. 9. PUBLIC ACCESS.

(a) In General.__The Secretary shall continue to allow private landowners reasonable access to inholdings in the Conservation Area and Wilderness.

(b) Glade Park.__The Secretary shall continue to allow public right of access, including commercial vehicles, to Glade Park, Colorado, in accordance with the decision in Board of County Commissioners of Mesa County v. Watt (634 F. Supp. 1265 (D.Colo.; May 2, 1986)).

Approved October 24, 2000.

LEGISLATIVE HISTORY__H.R. 4275:

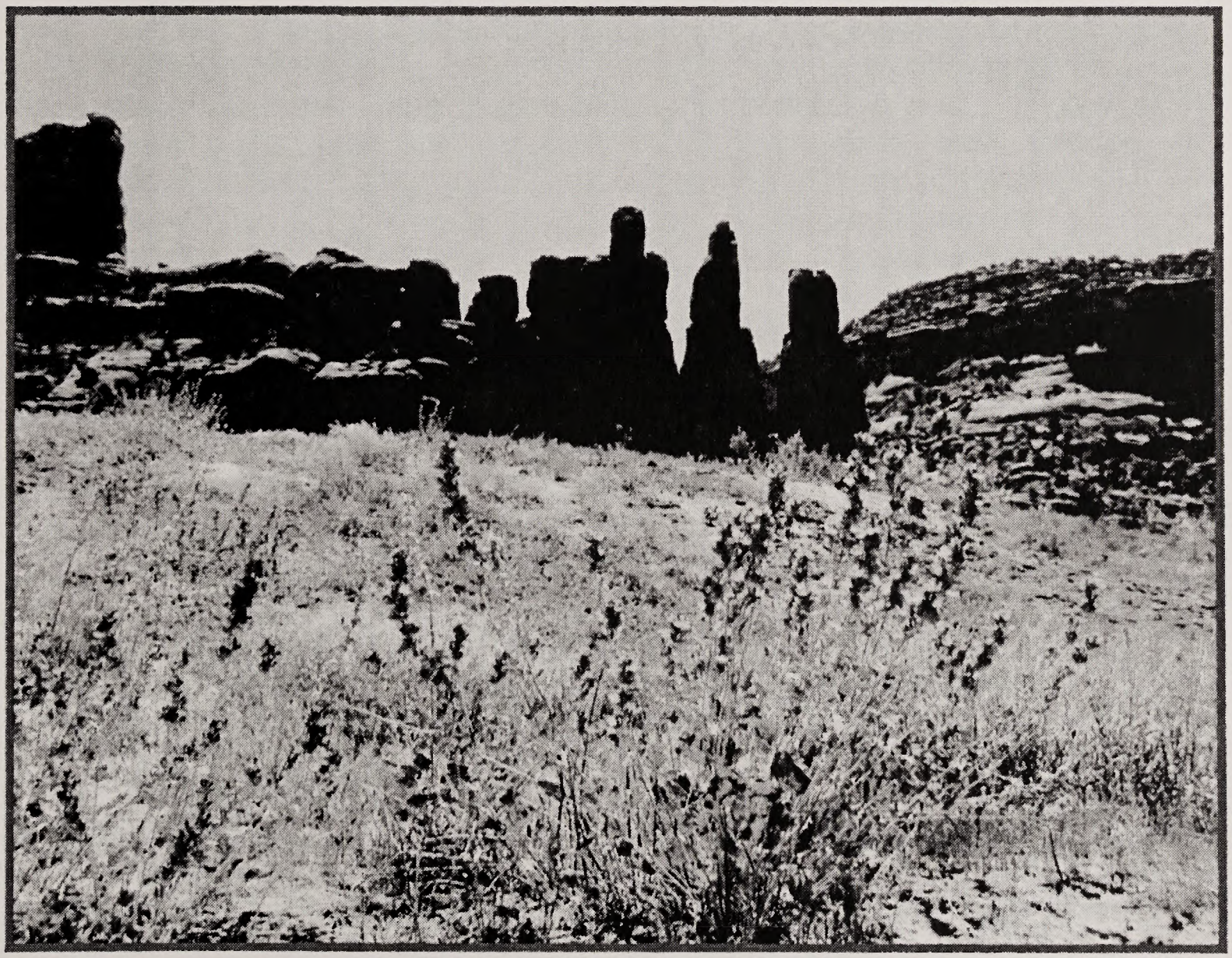
SENATE REPORTS: No. 106-460 (Comm. on Energy and Natural Resources).

CONGRESSIONAL RECORD, Vol. 146 (2000):

July 25, considered and passed House. Oct. 5, considered and passed Senate.

APPENDIX 2

Colorado Canyons National Conservation Area
Black Ridge Canyons Wilderness Management Plan



Moore Canyon, Black Ridge Canyons Wilderness

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Part I – Introduction

Background

The 75,550-acre Black Ridge Canyons Wilderness (BRCW) was designated as a component of the National Wilderness Preservation System on October 24, 2000, when the President signed into law the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000. The BRCW makes up the core area (61 percent) of the 122,300-acre Colorado Canyons National Conservation Area (CCNCA).

Purpose of the Wilderness Management Plan

This Final Wilderness Management Plan (WMP) establishes the objectives, policies and actions for managing the BRCW for the future. The plan identifies ongoing Wilderness management actions and prioritizes actions for implementation. It fulfills the Bureau of Land Management (BLM) policy requirement that a management plan be prepared for Wilderness. This plan incorporates many of the decisions from the 1998 Ruby Canyon/Black Ridge Integrated Resource Management Plan.

Location/Access

BRCW is located 2 miles southwest of Fruita in Mesa County, Colorado. Approximately 5,200 acres of the Wilderness extend into Grand County, Utah. The BRCW is situated on the northwest flank of the Uncompahgre Plateau. Access to the BRCW is provided via the King's View (Horsethief Canyon) Road, the Black Ridge Access Roads, BS Road and the Colorado River. (Figure A3-1). The Lower Black Ridge Access Road is open from August 15 to February 15, while the Upper Access Road is open from Easter weekend until August 15.

Wilderness Boundary

The Wilderness boundary follows private lands and the Colorado River (100-year flood plain) on the north; a narrow utility corridor on the east that parallels Colorado National Monument; the Black Ridge and BS Roads (boundary is 30 feet from centerline) and private property on the south; and the Mountain Island Ranch Road (boundary is 30 feet from center line), Utah state lands and private property on the west. (Figure A3-1).

Ownership/Land Use

The Bureau of Land Management administers all land within the Wilderness. There is no State or private surface or subsurface inholdings or utility rights-of-way within the BRCW.

Wilderness Values

The BRCW, with seven primary canyons totaling over 60 miles, has long been recognized as one of Colorado's premier wildlands, with sandstone arches, alcoves, monoliths, hoodoos and spires scattered throughout. The Wilderness, natural in character with negligible human imprints, is characterized by a high east-west ridgeline draining north to the Colorado River through the canyon network. Imprints on the upland mesas include fence lines, stock reservoirs, and trails that minimally impact the naturalness of the area due to unobtrusive locations and natural screening.

The BRCW provides outstanding opportunities for solitude due to the area's size, configuration, topographic variety and vegetative screening and are greatly accentuated by the area's ability to disperse visitors horizontally and vertically through the landscape.

The Wilderness provides outstanding opportunities for primitive and unconfined recreation based on outstanding scenery, landscape variety, geologic features, and cultural and paleontological resources. The area's topographic diversity, unusual geologic features and intermittent water-courses appeal to hikers, while unique phenomena, such the arches in Rattlesnake Canyon and the vast alcove in Mee Canyon enhance their hiking experiences. Other popular activities in BRCW include horseback riding, hunting, nature study, photography, wildlife viewing and backpacking.

The BRCW possesses a number of outstanding geological, paleontological, archaeological and ecological values and is also considered to have very high values for education and scientific research.

Climate/Air/Water

The BRCW has a high desert climate. It is primarily semi-arid and precipitation is variable. Annual precipitation in Grand Junction, 7 miles to the east of the Wilderness, averages slightly less than 9 inches of rainfall per year. Average annual snowfall is 22 inches. Temperatures in Grand Junction range from a mean maximum of 65 degrees F to a mean minimum of 38 degree F. Summers in the BRCW are hot with many days in the 90's. Most Wilderness use occurs in the spring and fall when temperatures are moderate.

Mesa County is in attainment with the National Ambient Air Quality Standards.

Intermittent flowing streams generally characterize the canyons within the BRCW. The upper parts of Mee and Knowles Canyons have seasonal flows. All canyons have some short-term flows associated with snowmelt and summer rainstorms. Water quality for these canyons is excellent.

Noise

Noise is defined by Colorado law as sound that is unwanted and which causes, or tends to cause, adverse psychological or physiological effects on human beings. Ambient noise levels are not available within the BRCW. In general, they are assumed low except for vehicular traffic noise on roadways bordering the Wilderness, locomotive engine noise and whistles from trains traveling through Ruby Canyon, noises associated with motorboat use on the Colorado River and noises associated with approved administrative uses of the Wilderness.

Soils

South of the Colorado River, the majority of soils are developing in sandstone parent material and eolian deposits under predominantly pinyon and juniper vegetation. Soils are generally shallow over hard sandstone bedrock with rock outcrops. In the Black Ridge area, shales of the Morrison and Dakota Formations have had a greater influence in soil development and they contain more clay. Nearly all soils in the BRCW have high water erosion potential and trails need to be carefully located to prevent accelerating soil lost. Biological soil crusts (a.k.a. cryptobiotic soils) are common on soil surfaces and once disturbed take long periods to re-establish.

Vegetation

Vegetation along the canyon floors consists of a combination of grassy parks and sparse stands of pinyon-juniper woodland. Isolated stands of cottonwood trees and other riparian species, such as willow and box elder, can also be found along the drainages.

Vegetation on the mesas consists of moderate-to-dense stands of pinyon-juniper woodland. The low-to-moderately dense stands support a diverse understory of shrubs, forbs and grasses. They provide important desert bighorn sheep habitat. Sagebrush parks are scattered throughout the uplands and provide vital deer winter range. Some parks are dominated by crested wheatgrass, introduced by BLM in the 1950s and 1960s.

Non-native plants are found in the BRCW. For definition, the noxious weed program focuses on plants characterized as “noxious” by the BLM, State Department of Agriculture, and or Mesa County. These listed plants are generally invasive in nature. In general, the upland portion of the Wilderness has few infestations of noxious weeds. Canada thistle and tall whitetop are found in Flume Canyon. Major canyon drainages host an abundance of scattered tamarisk.

The largest Colorado population of the rare plant, Canyonlands Lomatium, clings to the soil around the bases of the Rattlesnake Canyon arches.

Rangeland Health Standards for public lands in Colorado (approved in 1997) were applied to the BRCW in 2001 and 2002. Five public land standards were used to determine if the standards are being met. The five Land Health Standards include: (1) upland soils, (2) riparian systems, (3) healthy, productive plant and animal communities, (4) special status, threatened and endangered species, and (5) water quality. A site was determined to be "meeting the standards for land health" if all standards were being met.

Results of a land health assessment completed for the BRCW in 2001 (App 1) show that approximately 99 percent of the Wilderness meets Land Health Standards (see map - App 1, p. 80).

Wildlife

The fauna found within the BRCW is characteristic of the Colorado Plateau. To date, 10 species of mammals and 37 of birds have been inventoried in the area. Big game species in the BRCW include desert bighorn sheep, mule deer and elk. Other species of note include the golden and bald eagles, peregrine falcons (5 to 6 nesting pairs), and the collared lizard. A rare butterfly, Minor's Indra Swallowtail, is also a resident of the Wilderness.

Recreation

The BRCW provides outstanding opportunities for primitive and unconfined recreation (see Wilderness Values). According to the "Colorado Canyons National Conservation Area 2001-2002 Visitor Study Final Report" (Northern Arizona University, Dec 2002), hiking, horseback riding and nature study are the most satisfying activities in the Wilderness.

The current recreation management of the Wilderness is based on managing recreation for beneficial outcomes (as discussed in Chapter 2). Managers can provide visitors the opportunity to obtain their desired experiences and resulting benefits by managing the physical, social and administrative settings of an area. These settings are based on the Recreation Opportunity Spectrum (ROS), which classifies recreation settings on a scale from primitive to urban. These ROS classes help to reflect the ability of visitors to achieve specific experiences.

In 1992-1993, the BLM, Northern Arizona University (NAU) and the USDA Forest Service's Rocky Mountain Forest and Range Experiment Station participated in a Benefits Based Management pilot project for CCNCA. The Ruby Canyon-Black Ridge User Study assessed how the visitors used the CCNCA, keying in on activities, experiences and benefits. The CCNCA was re-surveyed by NAU in

2001-2002. These surveys provide important baseline and trend data as to what is happening with recreation in the Wilderness.

Black Ridge Canyons East/ Rattlesnake-Mee Canyon Access/ Urban Wilderness Interface

Scale of importance: -2(least) to 2(most)	**Desired Experiences**	**Ability to Realize** 1(low) to 4(high)
1.8	Savoring Wilderness aesthetics	3.5
1.8	Savoring area canyon country aesthetics	3.6
1.7	Escaping everyday responsibilities for a while	3.7
1.6	Releasing or reducing some built-up mental tensions	3.6
1.5	Enjoy frequent exercise	3.5
1.5	Feeling good about being isolated and independent	3.4
1.5	Enjoying easy access to diverse primitive and unconfined outdoor recreation environments	3.4
1.5	Enjoying exploration	3.2

Scale of importance: -2(least) to 2(most)	**Desired Benefits**	**Ability to Realize** 1(low) to 4(high)
1.8	Increase quality of life	3.4
1.7	Improved physical fitness/better health maintenance	3.5
1.6	Greater freedom from urban living	3.3
1.6	Enhanced sense of freedom in being able to get to this special place	3.4
1.6	Greater sense of overall wellness	3.5
1.6	Renewed human spirit	3.4

Black Ridge Canyons West

cale of importance: -2(least) to 2(most)	**Desired Experiences**	**Ability to Realize** 1(low) to 4(high)
1.8	Savoring Wilderness aesthetics	3.6
1.7	Savoring area canyon country aesthetics	3.7
1.7	Escaping everyday responsibilities for a while	3.8
1.7	Feeling good about being isolated and independent	3.2
1.6	Enjoying easy access to diverse primitive and unconfined outdoor recreation environments	3.9
1.5	Enjoying exploration	3.6

Scale of importance: -2(least) to 2(most)	**Desired Benefits**	**Ability to Realize** 1(low) to 4(high)
1.7	Increase quality of life	3.4
1.6	Improved physical fitness/better health maintenance	3.5
1.6	Greater aesthetic appreciation	3.4

Fire

Fire is an agent of vegetative change for the Wilderness ecosystem. BLM records indicate that since 1980, 146 fires have burned 5,500 acres in the BRCW. The average fire size has been 38 acres, although many fires have been less than one acre. Fire management in the Wilderness is guided by the current "Grand Junction Field Office Fire Management Plan." Fire management objectives in the Wilderness are: (1) use natural and prescribed fire to achieve desired plant communities, (2) permit lightning caused fires to play their natural ecological role, and (3) reduce to an acceptable level, the risks and consequences of wildland fire escaping from the Wilderness. The overriding goal is to preserve the ecological integrity of the Wilderness and adjoining lands by allowing lightning-caused fires to burn, under prescribed conditions, that do not appear to jeopardize life and resources. All fire activities (suppression and fire use) will be guided by minimum impact suppression tactics (MIST) and will use the Minimum Tool Analysis to minimize adverse impacts on the Wilderness values.

Cultural Resources

Man has occupied Western Colorado sporadically for about 13,000 years. The earliest cultural tradition was the Paleo-Indian, characterized by the hunting of now extinct megafauna and the production of distinctively fluted spear points. This was followed by the Archaic culture based on hunting and gathering. The Formative Period in western Colorado was a period of expansion/colonization by farmers from the southern Colorado Plateau. These Period sites are assignable to the Fremont cultural tradition that produced grayware ceramics, basketry and impressive rock art. The Fremont abandoned the region by 650 B.P (Before Present). The Utes, who were hunters and gathers, occupied the region until 1881.

Ranchers moved into the area after removal of the Utes. Much of the Wilderness provided excellent grazing for cattle and sheep. Historic cabins and many of the trails date from this period.

Paleontological Resources

Known fossiliferous formations within the BRCW include the Morrison Formation, Burro Canyon Sandstone, and the Dakota Sandstone. The Morrison Formation has consistently yielded dinosaur and other fossils. Fossil locations in the Morrison have yielded many scientifically important fossils, including over 12 varieties of small to large dinosaurs, well preserved varieties of early mammals, eggs, crocodilians, turtles, fish, numerous invertebrates, as well as a variety of fossil wood, pollen and other plant remains. The Burro Canyon Formation in the

Wilderness has produced a 115-120 million year old sycamore, which may be among the world's oldest known plants.

Livestock Grazing

BRCW is divided into 11 grazing allotments with 3 livestock operators. Approximately 4,900 Animal Unit Months (AUMs) of forage is available for livestock use. Grazing use permits have been issued for managing grazing duration, timing and livestock numbers to attain desired land health standards. Authorized Use Agreements have also been signed between BLM and livestock operators to provide specific guidance on restrictive use of motorized vehicles within the Wilderness. Motorized use is allowed only as the minimal tool for grazing allotments that were in operation prior to Wilderness designation. Fences, stock ponds, water catchments, and two-track routes to support livestock operations are located in the upland portion of the Wilderness. Grazing use is restricted to cattle only. Sheep use has been discontinued because of the possible transfer of disease from domestic sheep to the desert bighorns that inhabit BRCW. Grazing has also been discontinued in the major canyon bottoms, including Mee, Knowles, Rattlesnake and portions of Jones Canyons to protect riparian values.

Administration

Administrative use of the BRCW is guided by the "minimum tool" concept derived from section 4. (c) of the Wilderness Act. This Act generally prohibits motorized equipment or mechanized transport in designated Wilderness, although it does allow them "as necessary to meet the minimum requirements for administration of the area." This concept applies to grazing administration, on-the-ground Wilderness management, emergency services and fire and other resource management. These uses will always be in accordance with minimum tool principles. This means that motorized or mechanized means may be used to accomplish necessary objectives if Minimum Tool Analysis finds no other practical method through non-motorized or non-mechanized means. Authorized use agreements for motorized vehicle use in the Wilderness have been prepared with all of the grazing permittees based on minimal tool guidelines. Emergency services in the Wilderness are covered by agreements with the Mesa County Sheriff's Department. Emergency situations are reviewed and approved by the CCNCA Manager. The CCNCA Manager reviews proposals for motorized access into the Wilderness on a case-by-case basis. This Memorandum of Understanding (MOU), which is updated annually, provides a clear set of guidelines that emergency personnel can use to determine the appropriate type and level of response.

Part II- National Wilderness Management Goals

Four standard management goals have been established by the BLM for its designated Wilderness areas. The goals are as follows:

1. To provide for the long-term protection and preservation of the area's Wilderness character under a principle of non-degradation. The area's natural condition, outstanding opportunities for solitude, outstanding opportunities for primitive and unconfined types of recreation, and any ecological, geological, or other features of scientific, educational, scenic, or historical value present will be managed so that they will remain unimpaired.

2. To manage the Wilderness area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as Wilderness. The Wilderness resource will be dominant in all management decisions where a choice must be made between preservation of Wilderness and visitor use.

3. To manage the area using the minimum tool, equipment or structure necessary to successfully, safely, and economically accomplish the objective. The chosen tool, equipment, or structure should be the one that least degrades Wilderness values temporarily or permanently.

4. To manage non-conforming but accepted use permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's Wilderness character. Nonconforming uses are the exception rather than the rule; therefore, emphasis is placed on maintaining Wilderness character.

Part III- Wilderness Management Strategy

Limits of Acceptable Change

Limits of Acceptable Change (LAC) provides a process to determine appropriate resource and social conditions in recreation settings. LAC would provide the basis for monitoring in the BRCW. The primary emphasis of the LAC system is on the conditions desired, rather than on how much use an area can tolerate. The management challenge is not how to prevent human-induced change to the physical, biological or administrative settings within the BRCW, but rather deciding how much change will be allowed to occur, and what management actions would be implemented once limits have been reached or exceeded. Once in place, LAC can alert BLM managers to levels of unacceptable change and necessary actions. In doing this, LAC provides long-term protection and preservation of BRCW character. It is flexible enough to allow for site-specific situations, is cost effective, and is an excellent tool for public participation.

Four recreation management zones were identified in the Wilderness portion of the CCNCA out of the ten total recreation management zones identified in the CCNCA. Zone 9, the Urban Wilderness Interface and Zone 10, the Rattlesnake-Mee Canyon Access, are areas that provide relatively easy access into the Wilderness. The other zones in BRCW are Zone 8, Black Ridge East, and Zone 9, Black Ridge Canyons West. The Black Ridge Access Roads provide 4-wheel drive access to within one-half mile of the arches in Rattlesnake Canyon (a major attraction in this Zone). See Figure A-1. The "Black Ridge Canyons West" zone is more remote, difficult to access and provides both day and overnight use.

The LAC process is based on "indicators" and "standards" for each zone. Indicators measure important biophysical or social conditions. Standards define how much is acceptable for a given setting. For example, a social indicator could be the number of encounters per day. The standard could be less than three. Other example of indicators are: camp encounters, attraction site encounters, disturbance of biological soil crust, number of camps, feet/percent with braided trails, and percent of sites with litter/human waste. Good indicators must detect a change in conditions caused by human activities, be measurable by field personnel with simple equipment and allow different observers to consistently collect the same information.

The LAC process also requires developing a set of management actions to be taken when desired standards are not being met. These could be education actions, regulatory actions, development actions (modifying a trail system), or even use limitations actions.

Indicators, standards and management actions for mitigation purposes when standards are approached, will be developed and included in the Wilderness Monitoring Plan.

Part IV- Issues

Issue Identification

Issues concerning the planning and management of BRCW were gathered during public scoping meetings from written comments and through the participation of the Wilderness Zone Working Group as part of the development of the CCNCA Resource Management Plan (RMP). These issues were integral in the identification of management alternatives analyzed in the draft RMP.

The Wilderness Zone Work Group was one of four planning work groups composed of interested individuals from the local community. The group was instrumental in the development of Wilderness Zone planning through the alternative development stage. The Wilderness Working Group participated in

13 meetings (through January 2003) and 2 field trips (see Chapter 5 for more information).

Issues

1. Long-term protection of Wilderness characteristics (including naturalness, outstanding opportunities for solitude and primitive recreation and supplemental features).
   - What monitoring indicators and standards should be used to determine when changes to Wilderness settings are unacceptable?
   - How will Wilderness characteristics be maintained?
   - What actions should be taken when LAC standards are not being met?
   - How will BLM gather information from Wilderness users and incorporate into planning and management?
   - How will recreation outside the Wilderness boundaries be managed to protect Wilderness values.
2. Management of recreation use
   - What visitor facilities are appropriate for the Wilderness?
   - How will commercial recreation be managed in the Wilderness?
   - If a need arises, how can non-commercial recreation be more restrictively managed?
   - What are the most effective methods to monitor Wilderness use?
3. Management of vegetation
   - How should livestock grazing be managed in the Wilderness?
   - How should weeds be managed in the Wilderness?
   - How should fire be managed in the Wilderness? What is the role of fire in BRCW's ecosystem?
   - How does BLM's Rangeland health standards apply to Wilderness?
4. Management of non-conforming uses (administrative, fire management, special situations).
   - How will non-conforming uses in Wilderness be mitigated?
   - What criteria will best determine when an emergency situation warrants the possible impacting of Wilderness values?
   - What restrictions should apply to fire suppression activities?
   - When should the Colorado Division of Wildlife be allowed motorized access to manage wildlife?

Part V- Wilderness Management

Desired Future Conditions

When asked what the optimum future setting would be for the Wilderness, collaboration with working groups produced the following desired conditions:

- Maintain the Wilderness values.
- Keep the resources in as pristine a condition as possible.
- As a general rule, do not allow motorized or mechanized access.
- Visitors should experience a minimal number of contacts with other visitors.
- Grazing should be maintained at no higher than the current level.
- Minimal facilities should be provided for visitors:
    - New trails only as needed to prevent resource degradation;
    - Minimal signage;
    - Facilities for parking, information, camping, etc. should be limited and provided outside the Wilderness boundary.

Introduction to Objectives

In this section, objectives are established to address BRCW issues. Following each management objective is a prioritized list (highest priority first) of proposed actions, identified in the CCNCA RMP, that will help meet Wilderness management goals and desired future conditions. Monitoring may be conducted to determine the effectiveness of the proposals and BLM's ability to maintain desired Wilderness resource conditions and the Wilderness visitors' ability to realize desired experiences and benefits.

Objective 1. Maintain and enhance Wilderness values (naturalness, outstanding solitude, primitive and unconfined recreation, and supplemental features)

Proposed Management Actions to Achieve Objective 1 – Common to All Zones

1. Develop the BRCW Monitoring Plan that would address:
    - the overall monitoring process and time frames.
    - formation of a LAC team to assist in Wilderness monitoring. This team could include the Wilderness Working Group, members of the public and BLM resource specialists.

- reviewing of existing data and identify data gaps for new inventory.
- identification of indicators to be monitored.
- monitoring and sampling techniques and documentation to be used.
- training field people, volunteers and students who will assist in the monitoring.
- creating a database system to facilitate data analysis for Wilderness planning and management.
- developing standards which will be the limits of acceptable change for the BRCW.
- identifying appropriate actions to maintain standards.

2. All proposed actions are subject to a minimum tool analysis and approval by the CCNCA Manager. The MOU would be maintained and/or developed to provide for grazing, search and rescue, and fire operations. Motorized/mechanized use would not be allowed within the BRCW except for administrative use, which is guided by the "minimum tool" concept derived from section 4.(c) of the Wilderness Act.

3. Develop a comprehensive Interpretive Plan for the CCNCA and the BRCW that fully addresses interpretation, education and public outreach opportunities.

4. Require use of designated sites, personal portable toilets and firepans for camping along Upper and Lower Black Ridge Access Roads and BS Road.

5. Close the BRCW to all recreational hobby-collecting (rockhounding) to ensure that paleontological materials will generally be left in place.

6. Designate trails for hiking and equestrian use, although some of the trails are not traversable by horse.

7. Continue treatment of Russian Knapweed and Canada Thistle.

8. Prohibit the discharge of any projectile by any means but not limited to firearms, bows, crossbows and paintball guns except for law enforcement or hunting in conformance with laws and regulations.

9. Continue livestock grazing restrictions in Mee, Knowles, and Rattlesnake Canyons and expand to portions of Jones Canyon to protect riparian values.

10. Work closely with the Colorado National Monument, the City of Fruita and the urban interface community on common issues:

Fruita

Snooks Bottom parcel

Trails connectivity
Gateway Community
Colorado National Monument
Trail connectivity
Management consistency/coordination
Urban Interface
Community needs
Resource protection

11. Collaborate with the Federal Aviation Administration (FAA) to develop appropriate flight restrictions over the BRCW and request that this advisory be included on National Aeronautical Charts.

12. Do not grant special recreation permits for air tours over the CCNCA/BRCW.

13. Limit group size within the Wilderness in the first 2 miles of Knowles and Mee Canyons south of the Colorado River to 25; limit group size elsewhere in the Wilderness to 12.

14. Require dogs to be on a leash in high-use areas but under voice control in other areas.

<u>Proposed Management Actions to Achieve Objective 1 - Black Ridge Canyons East/ Rattlesnake-Mee Canyons Access/Urban Wilderness</u>

1. Designated travel on the Rattlesnake Arches Trail, Pollock Bench trails system, Flume Canyon and Devils Canyon trails system.

2. Evaluate the Devils Canyons trail system to determine if some trails should be closed and rehabilitated.

3. Designate the Rattlesnake Arches access road and trailhead for day-use only. Continue day-use designation within and near the outside of the Rattlesnake Arches Loop Trail.

4. Maintain the Lower Black Ridge Road and the Rattlesnake Arches Access Road at the current standard.

5. Designate parking locations along the Rattlesnake Arches road. The need for additional parking areas and turnarounds will be monitored.

<u>Proposed Management Actions to Achieve Objective 1 - Black Ridge Canyons West</u>

1. Implement a self-registration system where groups or individuals in this zone will be required to have a completed self-issue registration in their possession

for each visit. This system will help to better manage the Wilderness by providing information about user demographics, itineraries, group characteristics and other information. This system should be phased in from voluntary to mandatory.

2. New trails may be designated based on results of monitoring.

Objective 2. Provide for Primitive Recreation Opportunities

Proposed Management Actions to Achieve Objective 2 - Black Ridge Canyons East/ Rattlesnake-Mee Canyons Access / Urban Wilderness Interface

1. Maintain opportunities for visitors to realize their most important experiences and benefits:
   -increased quality of life
   -improved fitness/better health maintenance
   -greater freedom from urban living
   -enhanced sense of freedom in being able to get to this special place

Proposed Management Actions to Achieve Objective 2 - Black Ridge Canyons West

1. Maintain opportunities for visitors to realize their most important experiences and benefits:
   -increased quality of life
   -improved physical fitness/better health maintenance
   -greater aesthetic appreciation

Objective 3. Maintain a Wilderness Ecosystem and Healthy Natural Processes

Proposed Management Actions to Meet Objective 3 – Common to All Zones

1. Monitor for land health and maintain existing areas meeting BLM rangeland health standards.

2. Implement restoration and reclamation projects in BRCW if not meeting land health standards.

3. Place emphasis on improving plant diversity, particularly in those areas dominated by cheatgrass or crested wheatgrass.

4. Control noxious weed in the Wilderness through inventory, treatment and education. Continue treatments of Russian knapweed and Canada thistle until gone. Manage around spring sites and drainages to control tamarisk. Release bio-agents, if approved, for large-scale reduction in extensive stands.

5. Manage wildlife habitat in the Wilderness to maintain existing species.

6. Manage for Animal Damage Control in accordance with BLM Wilderness Management Policy and the BLM Animal Damage Management Plan. The State Director will approve predator control programs on a case-by-case basis.

7. Manage surface water to meet or exceed water quality standards, i.e. meet land health standards. Springs would not be developed but would continue to be used by hikers and wildlife and to sustain associated riparian areas.

8. Continue to monitor Rangeland Health in the BRCW.

9. Attain/maintain Desired Plant Community objectives.

10. Continue grazing use in accordance with grazing permits, Allotment Management Plans, BLM Wilderness Policy and Wilderness Act.

11. Maintain range improvements in accordance with Cooperative Agreements and the Wilderness Act.

12. Expand current restrictions on livestock grazing to Jones Canyon for protection of riparian values.

Objective 4. Provide Minimal Facilities to Meet Visitor Needs

Proposed Management Actions Meet Objective 4 - Common to All Zones

1. Maintain roads administered by BLM to their current condition, and permit no improvement through ROW authorizations.

2. Close non-designated roads/ways not used for administration.

3. Contain all parking facilities to prevent encroachment into the surrounding area.

4. Construct restrooms at designated Wilderness trailheads as need arises.

5. Remove fences that no longer have a purpose.

Proposed Management Actions to Achieve Objective 4 - Black Ridge Canyons East/ Rattlesnake-Mee Canyons Access / Urban Wilderness Interface

1. If future demand or resource impacts dictate, develop a campground outside the southern boundary of the Wilderness.

2. Evaluate the Devils-Flume Canyon Trail System to determine if there is a need to reduce and rehabilitate unnecessary trails.

Proposed Management Actions to Achieve Objective 4 - Black Ridge Canyons West

1. Limit additional dispersed camping along BS Road between Knowles Trailhead and Jones Canyon Trailhead to designated locations only.

2. If necessary to accommodate additional use, move and expand the Knowles Canyon Trailhead and develop horse parking area along BS Road.

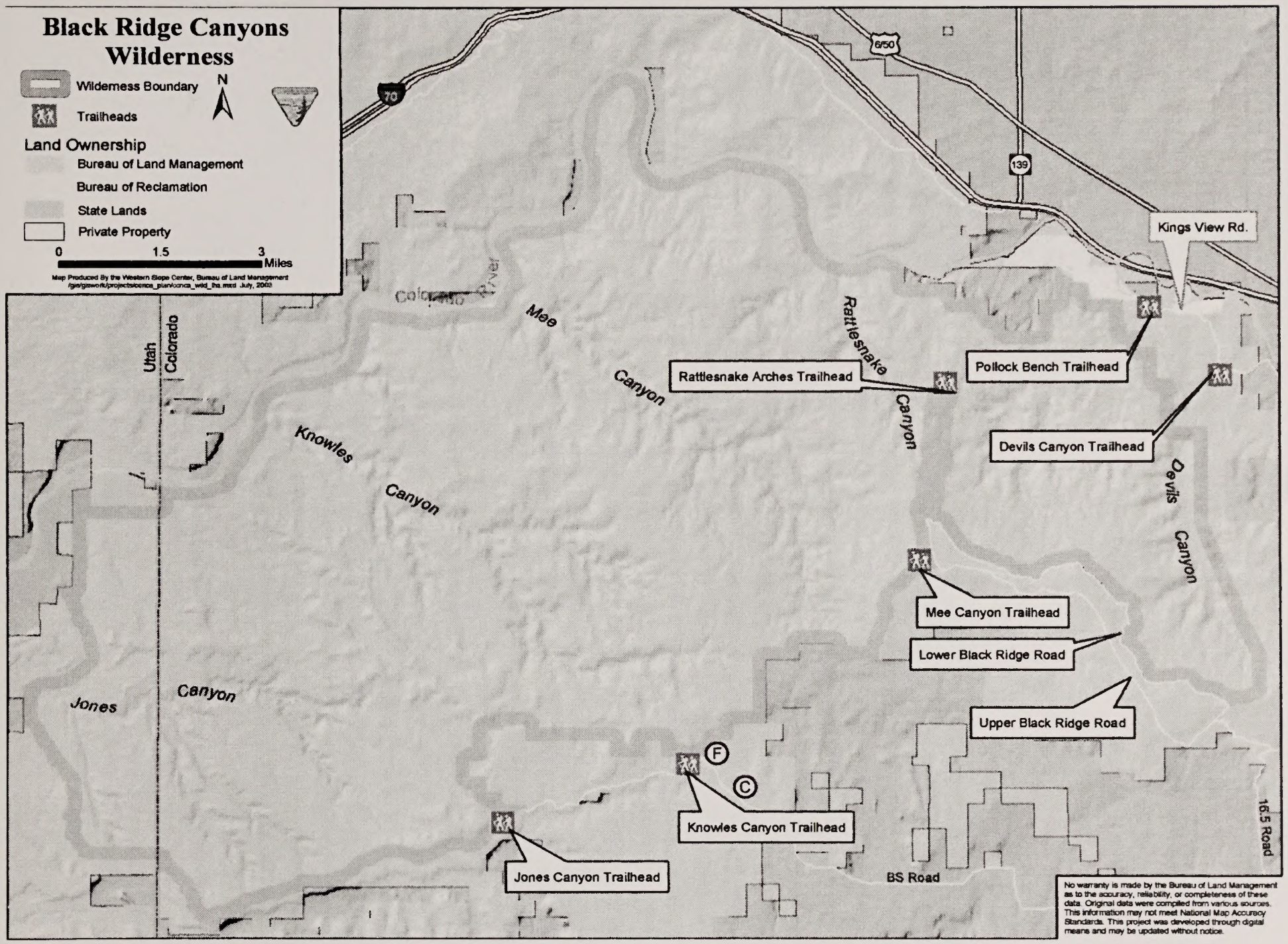
Part VI- Plan Implementation

Upon completion of the BRCW Management Plan, a business plan will be prepared to identify costs estimates and priority inputs into the annual work plan (AWP) process. It will provide the detailed guidance for implementing Wilderness management actions. When practical, alternate funding sources will be investigated.

Part VII- Plan Evaluation

Actions will be evaluated as they are completed. Every five years, a formal evaluation of the BRCW Management Plan should be conducted to ensure the proposed actions are being implemented and management is still consistent with the Plan's direction. The effectiveness of the LAC process should also be evaluated at this time.

Figure A2-1


Black Ridge Canyons Wilderness
Wilderness Boundary
Trailheads
N
Land Ownership
Bureau of Land Management
Bureau of Reclamation
State Lands
Private Property
0
1.5
3
Miles
Map Produced By the Western Slope Center, Bureau of Land Management
/gis/gswork/projects/ccnca_plan/ccnca_wild_fha.mxd July, 2002
70
6/50
139
Kings View Rd.
Pollock Bench Trailhead
Rattlesnake Arches Trailhead
Rattlesnake Canyon
Devils Canyon Trailhead
Devils Canyon
Mee Canyon Trailhead
Lower Black Ridge Road
Upper Black Ridge Road
Knowles Canyon Trailhead
Jones Canyon Trailhead
BS Road
16.5 Road
Colorado River
Mee Canyon
Knowles Canyon
Jones Canyon
Utah
Colorado
F
C
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This project was developed through digital means and may be updated without notice.

APPENDIX 3

Colorado Canyons National Conservation Area
Standard Operating Procedures

Mountain Biker on Mack Ridge

Standard Operating Procedures

The following management guidance applies to and is part of the Proposed Management Prescription, which incorporates the BLM core objective of multiple use, allowing for as wide a range of activity as possible while protecting the resources for future use and enjoyment. Guidance was set forth, for the long-range protection and management of the CCNCA, in the Colorado Canyons National Conservation Area and Black Ridge Canyons Wilderness Act of 2000 (the CCNCA Act, Public Law 106-353). All Standard Operating Procedures (SOP) are also based on existing laws, regulations, and policy.

Allowable Uses

The public lands will be managed under the principles of multiple use and sustained yield, as required by the Federal Land Policy and management Act (FLPMA). Any authorized use, occupancy, or development of the public lands that conforms to the Resource Management Plan (RMP) will be considered. Those uses; including rights-of-way, leases, and permits; will be subject to environmental review and may require limitations or stipulations to protect and preserve natural resources. Limitations may also be imposed on either the type or intensity of use, or both, because of environmental values, hazards, or special management considerations. Some limitations have already been identified for specific areas and are included in the management objectives in this plan.

Coordination with Other Agencies, State and Local Governments, and Indian Tribes

The BLM will ensure that the detailed management plans and individual projects resulting from the RMP are consistent with officially adopted and approved plans, policies, and programs of other agencies, state and local governments, and Indian Tribes. Cooperative Agreements and Memoranda of Understanding (MOU) will be developed as needed to promote close cooperation between the BLM and other federal agencies, state and local governments, organizations, and Indian tribes.

Air Quality

Under the Clean Air Act (as amended, 1977) BLM-administered lands were given a Class II air quality classification, which allows moderate deterioration associated with moderate, well controlled industrial and population growth. The BLM will manage all public lands as Class II unless they are reclassified by the state as a result of the procedures prescribed in the Clean Air Act. Administrative actions on the public lands will comply with the air quality classification for that specific area and appropriate State Implementation Plans.

When applicable (activities with the potential to affect air quality), the BLM would determine and document "conformity" with local, state, tribal, and federal air quality

laws, regulations, and standards (per 40 CFR 93.100 et seq). Conformity determinations would be included in site-specific activity plans and/or National Environmental Policy Act (NEPA) documentation.

Hazardous Materials

Prevent hazardous materials contamination of public lands:

Minimize releases of hazardous materials through compliance with current regulations. When hazardous materials are released into the environment, assess their impacts on each resource and determine the appropriate response, removal, and remedial actions to take.

Reduce risks associated with hazardous materials on public lands:

Evaluate all actions (including land use authorizations and disposals, mining and milling activities, and unauthorized land uses) for hazardous materials, waste minimization, and pollution prevention.

Complete site-specific inventories when lands are being disposed or acquired. It is departmental policy to minimize potential liability of the Department and its bureaus by acquiring property that is not contaminated, unless directed by Congress, court mandate, or as determined by the Secretary.

Inspect mining and milling sites to determine appropriate management for hazardous materials.

Barrier-Free Access

Access for, and use by, the physically challenged will be considered in all project planning.

Land Acquisition

The BLM will consider acquiring undeveloped inholdings within the CCNCA through exchange, donation, purchase, or transfer in order to:

1. Facilitate access to public lands and resources.
2. Maintain or enhance important public values and uses.
3. Maintain or enhance local social and economic values.
4. Improve management efficiency through expanding blocks of public lands.
5. Facilitate implementation of other aspects of the RMP.

All in-holdings should be acquired if possible as per the CCNCA Act.

Utility/Rights-of-Way (ROW) Exclusion and Avoidance

Utility and transportation development are not normally compatible with the objectives of the CCNCA. Therefore, the CCNCA would be designated as a ROW exclusion area. In rare cases due to public land boundaries and private inholdings, ROWs may be permitted based on consideration of the following criteria:

1. Type of, and need for the, proposed facility (local service to inholdings would receive priority consideration).
2. Conflicts with other existing or potential resource values and uses, particularly visual resource impacts.
3. Availability of alternatives and/or mitigation measures.

Unauthorized Use

It is BLM policy to identify, abate, and prevent unauthorized use of public land. Existing unauthorized uses of public land will be resolved either through termination, temporary authorization by short-term permit, issuance of ROWs, leasing through the Recreation and Public Purposes Act, or other appropriate manner.

Vegetation Management

There will be no sales of vegetation.

Weed Management

Per a Bureauwide policy, feed provided for horses must be weed free.

Wildlife

Wildlife habitat will be evaluated on a case-by-case basis as a part of project-level planning. Such evaluation will consider the significance of the proposed project and the sensitivity and importance of wildlife habitat in the affected area. Stipulations will be attached as appropriate to assure compatibility of projects with management objectives for wildlife habitat. Habitat improvement projects will be implemented where necessary to stabilize or improve unsatisfactory or declining wildlife habitat condition. Such projects will be identified through habitat management plans or project plans.

Threatened, Endangered and Sensitive Species Habitat

Whenever possible, management activities in habitat for threatened, endangered or sensitive species will be designed to benefit those species through habitat improvement.

The Colorado Division of Wildlife and the U.S. Fish and Wildlife Service will be consulted prior to implementing projects that may affect habitat for threatened and endangered species. If a "may affect" determination is made by a qualified BLM wildlife biologist, consultation with the U.S. Fish and Wildlife Service will be initiated in accordance with Section 7 of the Endangered Species Act of 1973, as amended.

Soil and Water Resources

Soil and water resources will be evaluated on a case-by-case basis as a part of project-level planning. Such an evaluation will consider the significance of the proposed projects and the sensitivity of the resources. Stipulations will be attached as appropriate to prevent adverse impacts to soil and water resources. Best management practices will be incorporated into management actions to protect and/or enhance water resources.

Water quality will be maintained or improved in accordance with state and federal standards. State agencies will be consulted, when necessary, on proposed projects that may significantly affect water quality. Water rights and permits, e.g. 404 permits, will be obtained prior to project implementation.

All BLM-initiated or -authorized actions potentially affecting wetland-riparian areas will comply with the spirit and intent of Executive Order 11990 (Protection of Wetlands) and BLM Manual Section 6740.06. These directives stress the avoidance of (1) ". . . long- and short-term adverse impacts associated with the destruction, loss, or degradation of wetland areas," and (2) the preservation and enhancement of "the natural and beneficial values of wetland areas which may include constraining or excluding those uses that cause significant, long-term ecological damage."

Recreation

A broad range of outdoor recreational opportunities will continue to be provided for all segments of the public. Trails and other means of public access will continue to be maintained and developed where necessary to enhance recreation opportunities and allow public use. Developed recreation facilities receiving the heaviest use will receive first priority for operation and maintenance funds. Sites that cannot be maintained to acceptable health and safety standards will be closed until deficiencies are corrected.

Recreation resources will be evaluated on a case-by-case basis as a part of project-level planning. Such evaluation will consider the significance of the proposed project and the sensitivity of recreation resources in the affected area. Stipulations will be attached as appropriate to ensure compatibility of projects with recreation management objectives.

Visual Resources

Visual Resources Management (VRM) is discussed in Chapter 3, Section 3.18, and class assignments are represented on that section's accompanying map (see Figure 3-16). Visual resources will continue to be managed as discussed, although assignments may be modified if future VRM analysis suggests more accurate ratings.

Visual resources will be evaluated as a part of activity and project planning. Such evaluation will consider the significance of the proposed project and the visual sensitivity of the affected area. Stipulations will be attached as appropriate to maintain visual resources.

Wilderness Resources

The Black Ridge Canyons Wilderness (BRCW) will continue to be managed in compliance with the Wilderness Act of 1964 and the BLM's Wilderness Management Policy.

Cultural Resources

The BLM is required to identify, evaluate, and protect cultural resources on public land under its jurisdiction and to ensure that Bureau-authorized actions do not inadvertently harm or destroy non-federal cultural resources. These requirements are mandated by the Antiquities Act of 1906, the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, Executive Order 11593 (1971), and the Archaeological Resources Protection Act of 1979, together with 36 CFR 800.

Prior to starting any Bureau-initiated or -authorized action that involves surface disturbing activities, the BLM will conduct, or cause to be conducted, a Class III (intensive) inventory as specified in BLM Manual Section 8111.4. This intensive inventory supplements previous surveys and will be done to locate, identify, and evaluate cultural resource properties in the affected areas. If properties that may be eligible for the National Register are discovered, the BLM will consult with the State Historic Preservation Office (SHPO) and forward the documentation to the Keeper of the National Register to obtain a determination of eligibility in accordance with 36 CFR Part 63.

Since any Bureau-initiated or -authorized action recognizes and accommodates cultural resources by virtue of SOPs, the only activity that may damage these resources is unplanned public use. Such activities include unauthorized recreational vehicle use, artifact collection, and illegal excavation for materials and antiquities. The location of these activities is impossible to predict and may occur in spite of measures designed to eliminate or limit them.

Cultural resource values discovered in a proposed project or authorized action area will be protected by adhering to the following methods:

Avoidance:	Cultural resources would be protected by redesigning or relocating the project or excluding significant cultural resource areas from development, use, or disposal.
Salvaging:	If a project cannot be redesigned or relocated, cultural resource values will be salvaged through controlled, scientific methods pursuant to the SHPO agreement.
Project/Action Abandonment:	If the site is determined to be of significant value or the abovementioned methods are not considered adequate, the project will be abandoned.

All cultural sites identified as special management areas will be closed to off-road vehicle (OHV) use, vegetation manipulation, and surface occupancy.

All cultural sites known to be eligible for National Register nomination, or listed on the National Register, will be protected from deterioration and be retained in federal ownership.

American Indian human remains will not be held or stored. In accordance with the Native American Graves Protection and Repatriation Act, remains and/or grave goods will be returned to the appropriate tribe upon their written request. (No items are currently known to exist in the CCNCA inventory.)

Inadvertent field discovery of American Indian human remains and/or grave goods will not be disturbed until the appropriate tribe is notified. All activity around the discovery will be halted, in accordance with the Native American Graves Protection and Repatriation Act, until the tribe has determined their recommendations.

American Indians may gather or tend traditional native plants or materials for personal use and/or use for traditional religious sites without obtaining a special use permit. Non-native plants may not be introduced. American Indians will be asked to inform the Grand Junction Field Office staff if they are gathering, tending, or using traditional religious sites in the CCNCA to avoid the possibility of conflict with visitors who may not understand the activity occurring and perceive or report to the BLM that unauthorized collection or use is occurring. (No traditional religious sites are currently known to exist in the CCNCA inventory.)

Paleontological Resources

Paleontological resources will be managed to protect specimens and maintain or enhance sites or areas for their scientific and educational values.

The potential impacts to the paleontological resources of the CCNCA are unknown, as an inventory has not yet been completed. Once an inventory is completed and site clearance becomes standard practice, with any needed monitoring and mitigation, and with further public education efforts, the resource will be adequately protected.

Cadastral Survey

Cadastral surveys will be performed when needed in support of resource management programs. Survey requirements and priorities will be determined on a yearly basis as a part of the annual work planning process.

Site-Specific Project Plans

The RMP provides general guidance for the CCNCA. More detailed management plans, called "project plans," will be prepared to deal with site-specific resource projects. Project plans include a detailed plan for completion of a particular project and an environmental assessment to evaluate any potential resource impacts.

Economic and Social Considerations

The BLM will ensure that any management action undertaken in connection with this Plan is cost-effective and takes into account local social and economic factors. Cost-effectiveness may be determined by any method deemed appropriate by the Bureau for the specific management action involved.

Environmental Review

Prior to implementation of proposed projects, a review will be done to determine if criteria is met for a categorical exclusion. Projects not meeting the criteria will require an Environmental Assessment (EA) with a Finding of No Significant Impacts (FONSI). If the assessment suggests a major federal action that would significantly affect the human environment, an Environmental Impact Statement (EIS) will be prepared under the direction of the BLM Colorado State Director. An EIS was prepared for this RMP and environmental consequences are discussed in Chapter 4.

APPENDIX 4

Colorado Canyons National Conservation Area
Desert Bighorn Sheep Plan
Gunnison Sage Grouse Conservation Strategy

Key Big Game Species of the CCNCA
Photo by Terry Bridgman ©

The Desert Bighorn Sheep Plan (1997) and the Gunnison Sage Grouse Conservation Plan Piñon Mesa, Colorado (2000) are included in this appendix as baseline reference materials and are subject to amendment by the Colorado Division of Wildlife. These plans are not considered to be Land Use Planning decisions for the Colorado Canyons National Conservation Area but would provide guidance for cooperative management of these species. Updates to these plans will be reviewed and incorporated as appropriate.

DESERT BIGHORN SHEEP PLAN

COLORADO DIVISION OF WILDLIFE
DESERT BIGHORN SHEEP
MANAGEMENT PLAN

BLACK RIDGE HERD UNIT REVISION

Prepared by:
Van K. Graham
Colorado Division of Wildlife
Terrestrial Wildlife Section
Grand Junction, Colorado

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MANAGEMENT PLAN WORKING GROUP MEMBERS

This bighorn sheep management plan herd unit revision was completed in conjunction with a public meeting and through a series of formal working group meetings. The working group for this herd unit was assembled in order to provide suitable input from various public and private groups who were interested in the management of both the bighorn sheep and habitat which the sheep utilize.

The working group will, when necessary, facilitate the implementation of the plan, consider issues as they arise and review progress of the plan's objectives.

The working group was composed of the following individuals.

	Representing	Concurrence and Date
Frank Adams	Rocky Mountain Bighorn Sheep Society	Signed May 30, 1997
Mary Clarke	Mesa County Woolgrowers Association	Signed February 2, 1998
Paul Creeden	Colorado Division of Wildlife	Signed April 30, 1997
Van Graham	Colorado Division of Wildlife	Signed April 22, 1997
Hawk Greenway	Rancher -- Glade Park area	Signed July 17, 1997
Warren Gore	Rancher -- Glade Park area	Signed July 7, 1997
Kathleen Hedlund	Sierra Club, Grand Junction	
Ron Lambeth	Bureau of Land Management, Grand Junction	Signed May 9, 1997
Patrick Perrotti	Colorado National Monument	Signed
Roberta Snyder	Glade Park citizens' representative	Signed February 7, 1998
Cathie Zarlingo	BLM Resource Advisory Council member	Signed October 3, 1997
Fred Facer	Colorado Mountain Club	Signed September 2, 1997

Other individuals recognized for their support of the working group include:

David Lehmann	BLM, Grand Junction -- facilitator
Judi Lofland	Colorado National Monument, recorder
Robbie LeValley	Colorado State University Extension Service, Delta County
Julie Hansmire	Colorado Woolgrowers Association

Jim Olterman: Signed 12/21/97

West Region Terrestrial Wildlife Supervisor, Division of Wildlife Date

INTRODUCTION

In 1989 the Colorado Division of Wildlife (CDOW) and the Bureau of Land Management (BLM) approved a restoration management plan for desert bighorn sheep in Colorado (CDOW and BLM 1989). This plan was developed to coordinate the establishment of self-sustaining desert bighorn sheep populations in western Colorado.

The 1989 management plan provided broad management guidelines for its implementation. It established population and habitat management objectives for each sheep herd along with the current land use management decisions, monitoring activities, planned actions and coordinated guidelines with other resource programs.

This plan is a revision of the 1989 management plan for the Devils-Mee Canyon unit, which has been renamed the Black Ridge herd to better define the herd's geographic range. The revised plan is a joint effort of the CDOW, BLM and Colorado National Monument (NPS).

Since the original management plan was completed in 1989, the restoration of desert sheep in the Black Ridge unit has not developed as anticipated. It was anticipated sheep transplanted during the initial reintroductions would populate all suitable range from within the Colorado National Monument to the Colorado state line and support a self-sustaining herd. During the late 1980's and early 1990's, it was determined by CDOW that the population had not extended its range west of Mee Canyon. It also appeared that population numbers were not increasing as predicted. The herd was expected to number about 170 animals by 1995; however, estimates ranged from 50 to 100 sheep in 1995.

Four separate transplants of desert bighorn sheep have been made to establish the herd. Three are considered to be founder herd transplants and took place in 1979, 1980 and 1981. Another transplant took place during October 1995 with the objective of extending the range of the established herd. Initially, efforts were made to transplant sheep from the existing Black Ridge herd. This transplant approach failed when suitable trap sites could not be found. An alternate transplant plan was initiated, which involved trapping and transplanting sheep from another state. A request for sheep was made from CDOW to the Nevada Division of Wildlife. This project included an environmental assessment which was completed by the Grand Junction Resource Area of the BLM for the proposed release. The NPS provided funds for this trap and transplant project.

Additional interest in restoring a desert bighorn sheep population occurred during 1995. The NPS indicated an interest in renewing efforts to establish a herd that would inhabit the Colorado National Monument.

This interest from the CNM, as well as heightened public concern about the desert bighorn herd and its management in the Black Ridge area, confirmed to the agencies involved that it would be appropriate to update this section of the 1989 management plan.

It was noted that the plan's development would benefit by more public involvement in the decision-making process.

In October of 1995, action was taken to update the Black Ridge desert bighorn sheep management plan. A desert bighorn sheep working group was formed in order that public interests would be represented in development of the management plan. The working group was composed of various interested individuals who represented a cross section of public and private groups, concerned citizens and landowners. The plan's development would be accomplished in a manner consistent with BLM and NPS rules, guidelines and regulations and would be adopted as a subsection of or an appendix to the BLM Ruby Canyon Management Plan.

This management plan applies only to the desert bighorn population within the identified her unit boundary. If the wild sheep population expands beyond the present boundary, then this plan will not apply to that portion of the population outside the her unit. If this type of expansion occurs, then a revision of this plan or a new plan will be necessary.

BLACK RIDGE HERD STATUS

The current number of desert bighorn sheep in the Black Ridge herd is difficult to determine. Accurately estimating numbers of animals in a free-ranging population is one of the most difficult problems facing wildlife managers. Census techniques are expensive and usually require that a portion of the population be marked in some manner. Often estimates are based on the minimum number of animals known to be alive in a population at a particular time. Minimum numbers may be determined by helicopter sex/age classification surveys and both intensive and extensive ground surveys. The minimum number is simply an enumeration of all the known sheep in the population.

Current estimates for this herd range from 50 to 75 sheep. The population estimates are based on several different indices including classification surveys (helicopter sex and age surveys), aerial and ground counts, and hunter harvest success.

The CDOW conducts classification surveys to obtain information regarding the age and sex structure of the population (Table 1). Surveys are usually conducted by helicopter. This information provides a minimum number of known animals observed during the survey. It also provides data on lamb survival and lamb recruitment into the adult population as well as data on distribution and movements. The sex/age ratios presented in the table are shown as the number of rams and lambs per 100 ewes.

Currently, there is a concern that the Black Ridge desert bighorn population is not growing and expanding its range as anticipated. The short-term objective established in the original management plan in 1989 was to have a population of 170 animals by 1995. This population size has never been reached. Both adult and lamb survival rates are lower than anticipated. The factors that might be influencing this problem are not well known. No widespread disease problems have become evident, although three sheep

skulls have been found that showed signs of chronic sinusitis. Predator populations are not known to have markedly increased. However, it has been well documented in the Black Ridge area that mountain lions have preyed on adult sheep in recent years.

Table 1. Desert bighorn sheep classification surveys for the Black Ridge herd.

DATE	CENSUS COUNT	LAMB:EWE RATIO	RAM:EWE RATIO	CENSUS TYPE
1991 0613	54	53.8/100	42.3/100	hel
1993 0623	39	61/100	8.6/100	hel
1994 0922	20	8.3/100	58/100	ground
1994 1012	31	26.7/100	80/100	hel
1995 0620	25	50/100	100/100	hel

BLACK RIDGE HERD UNIT BOUNDARIES

Generally, the Black Ridge desert bighorn sheep herd unit area is bounded on the north by the Colorado River and the canyons draining into the Colorado River from Black Ridge and the northeast boundary of the Colorado National Monument to Little Park Road, on the east and south by Little Park Road, the southwest boundary of the Colorado National Monument and the Black Ridge Divide, and on the west by the Colorado/Utah state line (Figure 1). It includes the entire Colorado National Monument. This management plan pertains only to lands within Colorado due to jurisdictional boundaries, but a small herd of desert sheep exist in Utah immediately west of the Black Ridge herd in the Marble and Star Canyon area.

DESIRED POPULATION SIZE

Goal: The goal is to establish a self-sustaining desert bighorn sheep population which will persist over time within the Black Ridge herd unit. The population should be large enough to ensure genetic diversity within the sheep herd. This diversity should be enhanced through random individual interchange with other desert sheep populations in both Colorado and Utah. The CDOW, NPS and BLM will coordinate and cooperate with the Utah Division of Wildlife, Utah BLM and NPS Parks in the management of this sheep herd.

Objective: The long-term objective is to manage this herd unit to support a population ranging from 100 to 525 animals.

DESERT SHEEP POPULATION MANAGEMENT OBJECTIVES

Population Size

Management of sheep numbers is essential for long-term survival of the herd. The habitat available for this herd is finite, which limits the maximum number of sheep that can be sustained. Concerns regarding sheep numbers are important with regard to both minimum and maximum numbers.

There is a substantial amount of information available relating to minimum viable population size for wild sheep. If the number of sheep is too low (less than 100), concerns are increased regarding the establishment of a self-sustaining population (Berger 1990). These concerns revolve around genetic diversity and the potential impacts of disease and excessive predation on a small number of animals. Conversely, populations which are too large can adversely impact desired plant community objectives and the domestic livestock industry. Recreational uses would be impacted if the concern for protecting bighorns did not relent commensurately with the increased security of the herd.

Genetic isolation concerns pertain to the level of genetic variation (heterozygosity) in the herd. Low levels of genetic variation may suggest inbreeding is occurring in a population. Inbreeding can result in various types of physiological problems, which are often detrimental to long-term herd survival.

Excessive predation on a small herd, particularly by large carnivores such as mountain lions, can impact the herd's ability to maintain itself. This occurs when annual production in a small herd is unable to keep pace with losses due to predation.

The population objective developed by this plan is a result of both socioeconomic and biological considerations. Some of the socioeconomic considerations include historic uses such as grazing, deer hunting, hiking, horseback riding and other recreational uses, both within and adjacent to the sheep range. Biological considerations relate to the maintenance of healthy vegetative communities and a robust bighorn sheep population. The desired population objective (100-525) reflects a balance between maintaining a viable minimum sheep population and numbers that are too high, which would affect range conditions and other uses.

Minimum population size was determined through a literature review. Symonds and Singer (1995) state that a population of approximately 100 sheep is critical to short-term persistence of a few decades for bighorn sheep. Although, Krausman, et. al. (1993), reports on six populations of less than 50 individuals that persisted for at least 34 years in the southwest United States.

Figure 1. APPROXIMATE BOUNDARY OF BLACK RIDGE DESERT BIGHORN SHEEP HERD UNIT

The maximum population number for this herd was determined using several different analytical techniques, the results of which were then assessed to achieve the most appropriate number. BLM data indicate that there is enough forage to support 853 desert sheep (Appendix A-A). This level of use was determined after the forage allocation for domestic livestock had been subtracted from the total available. The BLM used a second method to determine an upper population limit using a habitat suitability rating system developed for desert bighorn sheep. This method indicated a population of 538 sheep could be supported (Appendix B).

The lower population number derived by the two methods was selected as the upper population objective for this herd. This provides a cushion which will serve to further protect vegetation from over utilization.

If populations remain below 50 sheep through a period of five years it will be necessary to reevaluate this plan and the need to continue ongoing management practices.

The maximum population objective of 525 sheep may need to be decreased if monitoring data, including the condition of the vegetative environment, indicate that sheep numbers are exceeding desired forage use levels. Populations will be adjusted to a desirable level through sport hunting on land other than those administered by NPS.

Population Monitoring

This plan recognizes that the herd's population may fall below 100 animals in the future. This will not jeopardize ongoing management practices including population monitoring, habitat management and hunting seasons. Continued active management of this herd will be based on population monitoring data including:

a. Population size
b. Recruitment of young into the adult population
c. Impacts of predation
d. Incidence of disease problems

Both resident populations and recently transplanted populations will be monitored. Monitoring will be conducted to determine critical biological components that document the viability of the herds. These components include:

1. Reproductive success as measured by both the number of lambs born and survival through the first year of life. Survival to the first year would be termed recruitment into the population.
2. Sex/age ratio data. This would include the number of rams and lambs per 100 ewes.
3. Survival of adult animals. Including average length of survival in years. Documentation of mortality factors, including predator losses.
4. Movements throughout their ranges relative to times of the year.

5. Delineation and documentation of critical ranges including seasonal use areas (spring, summer, fall, winter), lambing areas, breeding sites, migration corridors, avoidance areas (suitable habitat not used), preferred feeding sites, and escape terrain.
6. Annual population estimates based on the best available data.
7. Assessment of human related impacts, including the impact of dogs (see section below).

Sheep monitoring and population assessment will be conducted using several different methods, these include:

1. Monitoring will be conducted by ground and aerial survey. Aerial survey will be conducted by both fixed-wing and helicopter aircraft. CDOW will provide the fixed-winged aircraft. Helicopters will be contracted when needed.
2. Sheep locations will be filed in a computer database. Locations will be kept by the Universal Transverse Mercator mapping system. Other pertinent biological and physical data regarding sighting locations will also be recorded and stored in the database.
3. Intensity of monitoring will vary based on the biological season of the year. Regular monitoring will be conducted to study the survival and condition of each animal. Schedules will be developed so that data necessary to evaluate study requirements are met.
4. Data will be used to update CDOW Wildlife Resource Information System (WRIS) mapping files. Annual reports will be completed documenting results of field studies.
5. Survival, movements, and mortality will be documented using radiotelemetry when collared sheep are available in the population.

Transplants:

The intent is to establish a self-sustaining population rather than maintaining minimum populations through a series of transplants. Transplants will not be used to increase herd size in the event natural herd production is unable to maintain minimum population size. Also, additional data is needed from population monitoring to clarify the criterion for future transplants.

Currently, future transplants will be considered as follows:

1. To extend the range of the herd to encompass the entire desired unoccupied potential habitat (Figure 1) if sheep do not expand naturally on their own. It has been found that bighorn sheep are often poor pioneers because of social bonding that favors use of established areas (Risenhoover et. al., 1988).
2. To ensure increase heterozygosity if genetic testing indicates that it would be advisable to increase genetic diversity.

The BLM and NPS will complete NEPA requirements for all future transplants on public lands in their jurisdiction. Public involvement will remain an important part of this process.

Predation

Recently acquired data indicate that mountain lions may be having a significant impact on the sheep population. Between November of 1995 and May 1996, seven radiocollared sheep died. Field inspection of the carcasses indicated five were killed by mountain lions; one sheep may have been killed by lion and the last died of unknown causes, but was not likely killed by predators. There is also speculation that a significant portion of the lamb mortality may be attributed to predation, but no definite data are available to support this supposition.

Two recently published reports conclude that mountain lion predation can be a significant limiting factor on herd viability (Boyce et. al. 1996, Ross et. al. 1996). In some cases lion predation on bighorn sheep appears to be largely an individual, learned behavior with some individuals preying heavily on sheep.

This information combined with Black Ridge monitoring data may indicate a similar situation with one or several lions that are having a significant impact on the population. Mountain lion harvest in the Black Ridge area is known to be very low. Hunters and outfitters who guide hunters are reluctant to hunt this area due to the difficult terrain and problems this can cause with pursuit hounds. In recent years the annual harvest quota for mountain lion has not been met in CDOW Game Management Unit 40. Since 1990, 57% (31 harvest/54 quota) of the quota has been taken by hunters. In order to encourage harvest and target mountain lion, several possible alternatives will be explored by CDOW (note: hunting is prohibited within Colorado National Monument). These options include:

1. Encourage outfitters to guide hunters on an "old west" horseback hunt. This type of hunt may appeal to a certain category of hunters.
2. Provide incentives to encourage lion hunting in the Black Ridge area by increasing the bag limit to two lions.
3. If monitoring shows that one or a few lions are causing most of the mortality, then target that lion for harvest. This may include special hunts to target specific animals. As part of ongoing monitoring studies, removing specific lions may help in determining if individual lions may be responsible for much of the predation losses.

Conflict resolution domestic/wild sheep concerns

Considerable controversy, throughout the western U.S., revolves around the issue of potential disease interactions between bighorn and domestic sheep. The issue centers

around the possibility that domestic sheep may transmit diseases to wild sheep populations resulting in large die-offs of the wild herds. Michael Miller, DVM PhD, and CDOW veterinarian, in a letter to the American Association of Wildlife Veterinarians states:

> "Pasteurellosis has long been recognized as an important disease of both bighorn sheep and domestic livestock. A pneumonia complex impairs bighorn populations performance throughout North America, and similar respiratory disease complexes plague both cattle and sheep industries worldwide. The bacteria, Pasteurella spp., play a major role in each of these. Wildlife and agricultural professionals share frustration over inability to completely understand and control these complexes" (Miller 1989).

In light of this potential disease dilemma, current recommendations from most wildlife managers encourage, that where possible, bighorns and domestic should not extensively share habitat. However, Miller (1989) further recommends a conservative approach to co-management of domestic and wild sheep. Due to the considerable amount of uncertainty regarding the aspects of disease interchange, Miller concludes that the extent of conservatism in managing these interactions should be decided by local wildlife and livestock professional on a case-by-case basis.

During the course of the development of this management plan, working group members encountered similar controversy regarding this disease problem. Our approach to this problem evolved in the direction of the recommendations that Miller suggested i.e., we decided to deal with the concerns at a local level and recommended the following actions discussed below.

Currently, there is no domestic sheep grazing within the Black Ridge bighorn herd boundaries or adjoining lands to the south. Most of the BLM grazing allotments on lands within or adjacent to the herd area were voluntarily changed from sheep to cattle by the permittees except the Upper Bench, Battleship and 28 Hole allotments which still authorize sheep grazing. There are no limitations or restrictions which would prevent landowners from changing back to sheep grazing on their private land or on BLM allotments which currently authorize sheep use. On BLM lands that were converted to cattle, the permittee would have to obtain authorization to change back to sheep. Large portions of the Black Ridge herd area are not grazed by livestock including the CNM (grazing is prohibited within the boundaries of CNM), major canyon bottoms and the benches above Pollock and Flume Canyons.

In order to minimize conflicts which may be detrimental to bighorn sheep, the following actions should be considered in the event domestic sheep are again grazed in close proximity of the Black Ridge herd. These concepts are predicated on cooperative attitudes and open communications between private landowners, NPS, BLM and CDOW.

It has been noted in the past in the Black Ridge area that domestic sheep have been observed to be spatially close to wild sheep and no known mingling has occurred and with no documented adverse impacts to wild sheep.

1. Natural barriers should be used on BLM lands to maintain separation of sheep in the event that domestic sheep grazing is begun in close proximity to the wild sheep. Both topographic and vegetative barriers should be considered. These will be dealt with on case-by-case basis on allotments. Natural barriers include rocky cliffs, ridges, escarpments and vegetation. Dense pinyon-juniper woodlands should be encouraged in border areas where domestic sheep may be grazed. Both natural and prescribed fire should not be encouraged in these areas.
2. Fencing (conventional livestock), in short segments, should be used to augment natural barriers on BLM lands. Extensive segments of conventional fencing, eight foot, or double fencing is considered too expensive to use over the entire Black Ridge herd unit boundary. CDOW may install fencing if there are consistent problems in localized areas. Movements of other species of wildlife, including deer and elk, should be considered prior to fence construction.
3. Grazing permittees would be allowed to change from cattle to sheep on nearby BLM lands provided a management plan or cooperative agreement is adopted by CDOW, BLM, NPS and the permittee to minimize the risk of mingling of wild and domestic sheep. This also applies to trailing of domestic sheep.
4. Aggressive herding should be used to prevent mingling of bighorns and domestic sheep. As an example, Idaho allows herding dogs to deter bighorns in efforts to discourage mingling. Aggressive herding could include extra herding dogs, extra herders or any other herding techniques applied to reduce the possibility of mingling.
5. The purchase of easements may be used in the event that other methods prove unsatisfactory in maintaining separation between wild and domestic sheep.

The CDOW will respond to the presence of bighorn sheep on private land on a case-by-case basis as it applies to potential disease situations. Capture, quarantine and monitoring (including assessment for research information) will be the first priority in handling situations where there is concern for the welfare of the wild sheep. Euthanasia of wild sheep will be a secondary preference where the health of the entire wild herd may be in jeopardy.

Game damage situations will be handled by the CDOW according to CDOW guidelines.

<u>Recreation conflicts with desert bighorn sheep</u>

Wildlife research and management studies have shown that bighorn sheep can be affected by human use of the environment. Human-wildlife interactions are especially relevant in wilderness areas where resource managers must attempt to provide habitat for species that may be very sensitive to human activities (Hendee et. al., 1990).

In order to avoid impacts detrimental to bighorn sheep, recreational users of the Black Ridge area need information and education regarding wild sheep behavior. Human use of the area may need to be regulated in some manner to further protect sensitive areas.

Additionally, studies (Harris et. al., 1993) have shown that one group in five recreational users was accompanied by dogs in New Mexico. Dogs, by nature, tend to roam extensively when out with recreationists and some may potentially harass or kill wild sheep.

Currently, there are no known areas where direct impact by human use has been detrimental to the Black Ridge bighorn sheep herd. However, recreational use is increasing as people become more familiar with the recreational opportunities that exist in the area.

The amount and intensity of recreational use is important information when evaluating impacts on desert sheep. Additional data should be collected in order to more accurately assess impacts to sheep should they occur. Currently, there are trailhead registration books at Liberty Cap, Monument, Devils and Pollock Canyon trailheads. Data related to recreational use may be collected by the following means:

1. Interested individuals (volunteers)
2. River outfitters
3. CDOW surveys
4. NPS and BLM surveys including additional trailhead sign-in stations
5. Trail and road electronic traffic counters

During this desert sheep planning process specific localities were identified where recreational activities were of concern to desert bighorn populations. Efforts should be directed at minimizing human disturbance in crucial areas, e.g., lambing, rutting and other seasonal concentration areas.

Implementation of proposed management actions initially will be done through information and education programs. More formal regulations may be necessary if voluntary compliance efforts are unsuccessful.

Informational brochures will be prepared and distributed by CDOW, NPS and BLM which will include information regarding desert bighorn sheep protection, management and viewing. This information on management will be sent to appropriate recreational users including hiking and climbing organizations, professional commercial users, outdoor equipment retailers and at the Glade Park Store. River outfitters will be asked to assist in protecting important desert sheep areas and habitat.

Potential Recreational Conflict Areas

1. Devils Canyon - This area receives approximately 6,000 recreational visits per year. Most of the activity is in the form of recreational hiking (75%). Almost a third of the use occurs during the month of May. There is the potential for commercial recreational rock climbing to occur on the canyon walls. Devils Canyon is used year-round by desert sheep. It is also a known lambing area. Impacts would be to lambing and disruption of the overall use of the canyon by sheep.

   Management Direction

   a. Hiking in the main canyon is acceptable. Hikers will be encouraged to hike only as far as the old BLM cabin.
   b. Hiking in the side canyons will be discouraged, particularly during lambing season from April 1-June 1 each year.
   c. Rock climbing should be encouraged at alternative sites away from Devils Canyon. Commercial permits for climbing and horseback riding need stipulations for seasonal restrictions--April 1 - June 1 annually for lambing season.
   d. Installation of information signs at Devils Canyon trailhead and old cabin.

2. Pollock and Flume Canyons - This area receives approximately 5000 recreational visitors per year. Roughly half are mountain bikers, the remaining half are hikers and horseback riders. These canyons are used by bighorn sheep, particularly both forks of Pollock Canyon. Lambing is known to occur in these areas. Concerns are associated with the Pollock Bench bike trail and increased hiking into the canyons.

   Management Direction

   This area will be monitored to determine if recreational use is at levels which may adversely impact bighorn sheep. If problems occur, then seasonal closures and other management may be necessary.

   a. CDOW remote monitoring of sheep use
   b. BLM trailhead monitoring station (sign-in trail book) and trail traffic counter

3. Mee Canyon - This remote area is a desirable destination site for hikers due to its unique geological features, including the alcove in the upper portions of the canyon. Desert bighorn sheep inhabit the entire canyon as well as the alcove area. Public use (number of visits) to the alcove site is unknown, but has increased significantly in the last five years. A lack of escape routes above the alcove may limit sheep use if recreational activities are excessive.

Management Direction

The Mee Alcove Trail and signing issues are being addressed in the Ruby Canyon Plan. The management practices included in this plan should be implemented for management of desert bighorn sheep.

4. Rattlesnake Canyon - This canyon is important bighorn sheep habitat. It is both a lambing area and year-round use area.

Management Direction

Construction and maintenance of an information trail sign at the "T" in the road near the heads of Mee and Rattlesnake canyons.

5. Colorado National Monument - Bighorn sheep are often found using western portions of the Monument. Most commonly sheep are observed in Monument, Fruita and Kodels Canyons, as well as along the historic Rim Rock Drive. Visitors are known to get out of their vehicles and disturb wild sheep. This is for the most part unintentional.

Management Direction

Educate visitors through interpretive programs and brochures as to the sensitivity of wild sheep to humans. Encourage visitors to view sheep at appropriate distances and from their vehicles.

HABITAT MANAGEMENT OBJECTIVES

Management of the habitat on Black Ridge is essential for maintenance of the ecosystem. Similarly, habitat management is an important part of maintaining desert sheep populations. Currently, the BLM is in the process of developing a management plan for the Ruby Canyon area, which encompasses most of the Black Ridge desert sheep range. During the development of the Ruby Canyon Plan, desert bighorn sheep habitat concerns and requirements are being considered. Therefore, this desert bighorn management plan will comply with recommendations and decisions developed for habitat management in the Ruby Canyon Plan.

The Ruby Canyon Plan will address but is not limited to road management, desired plant community characteristic, natural fire management, and recreation management.

As wild sheep habitat within Colorado National Monument is being managed as a natural ecosystem, no habitat management improvements are contemplated.

Grazing Management (BLM)

Cattle grazing is one of the many uses occurring in the Black Ridge area outside of Colorado National Monument. During the development of bighorn sheep population objectives, bighorn forage availability was determined after domestic livestock consumption was considered. Grazing management is addressed in allotment management plans developed by the BLM.

Natural Fires

Natural fire, except for bighorn vegetative barriers, will be encouraged on BLM lands as directed in the Ruby Canyon Management Plan. In critical bighorn sheep use areas, increasing the amount of open visual distance in the pinyon-juniper habitat would be a desirable goal. All natural fires are suppressed on Colorado National Monument lands. However, future prescribed fire management plans may amend this policy.

Habitat Improvement Projects

Limited opportunities exist within the National Monument and BLM Wilderness Study area for habitat alteration or augmentation. However, removal of man-made obstacles such as old fences may be appropriate in both areas. Small scale water developments are appropriate for BLM WSAs and two presently exist.

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APPENDIX A. ESTIMATION OF CARRYING CAPACTIY - METHOD 1

Allotment	Total Available Forage (lbs)	Allowable Use (50%)	Authorized Livestock AUMs	Livestock Forage (lbs)	Forage Available After AUMs (lbs)	Sheep Capacity (#)
Mtn Island	2,938,680	1,469,340	1,180	920,400	548,940	304
CO Ridge	1,108,478	554,239	659	514,020	40,219	22
Rattlesnake	143,699	71,850	21	16,380	55,470	31
Little Dolores Bench	304,389	152,194	97	75,660	76,534	43
Black Ridge	551,984	275,992	459	358,020	0	0
Radio Tower	157,201	78,600	119	92,820	0	0
Upper Bench	932,589	466,294	328	255,840	210,454	117
Burke	217,229	108,615	100	78,000	30,615	17
Knowles	361,057	180,528	234	182,520	0	0
Lower Bench	1,367,388	683,694	1,400	1,092,000	0	0
Unalloted	1,148,163	574,082	0	0	574,082	319
				Total	1,536,314 lbs	853

Total Available Forage. Forage available for bighorn sheep and livestock.

Allowable Use: 50% of Available

Livestock Forage: AUM's x 780 lbs. of forage per AUM

Forage Available After AUM's: Allowable Use - Livestock Forage

Sheep: Forage Available After AUM's divided by 1800 lbs. of forage per sheep per year

Note: analysis does not include lands within Colorado National Monument

Appendix B. Estimation of desert bighorn sheep carrying capacity - Method 2

To estimate the carrying capacity of the Black Ridge desert bighorn sheep herd's range, the following publication was used:

> Armentrout, D.J., and W.R. Brigham. 1988. Habitat Suitability Rating System for Desert Bighorn Sheep in the Basin and Range Province. BLM Technical Note 384. 18pp.

The method considers 10 habitat variables to derive a factor that rates the quality of the range. This factor used with size of the range and the estimated density of bighorns on the best ranges yields the estimated carrying capacity of the range. The rating system was modified by using the arithmetic mean of the weighted variables, called Weighted Indices (WIs), instead of using the geometric mean. The concept of the geometric mean is that the habitat suitability rating factor must be less than its weakest WI. This negates the weight of the other habitat variables. This seems extremely conservative and would imply that the existing herd is impossible.

The following habitat variable and the scores are averages for the existing and designated potential range of the Black Ridge herd of desert bighorn sheep.

Suitability Index Variable (SIV)	Rating & Description
1. Topography	.70 mesas & Canyons
2. Water, amount & permanence	.70 average site dry 25% of all years
3. Water, distance	.80 distance from escape terrain
4. Water, competition	.50 some big game and livestock
5. Visual obstruction	.70 at distance 50'&height 3'>60%of object visible
6. Water, distribution	.35 percent of area within mile of H2O
7. Forage areas	.70 forage rating for majority of range
8. Vegetation condition	.75 late seral stage
9. Space--human conflict	.70 medium use, restrictions, no economic change
10.Domestic sheep, distance	.10 usually less than 5 miles

Weighted Indexes

Cover(WIC) = SIV#1 = 0.70
Water(WIW) = SIV#2(SIV#3+SIV#4+SIV#5+SIV#6)/4 = 0.41125
Forage(WIF) = (SIV#3+SIV#5+SIV#7+SIV#8)/4 = .7375
Human(WIH) = SIV#9 = 0.70
Sheep, Domestic(WIS) = SIV#10 = 0.10

Habitat Suitability Rating(HSR) = (WIC+WIW+WIF+WIH+WIS)/5 = 0.53
Total Square Miles(TSM) = 145 = 93,000 acres
Occurrence(OCC) = optimum # of bighorn sheep per square mile, from literature=7.0
Carrying Capacity = HSRxTSMxOCC = **538 desert bighorn sheep**
Note: analysis includes lands within the Colorado National Monument

GUNNISON SAGE GROUSE CONSERVATION PLAN PIÑON MESA, COLORADO

Prepared by:
Piñon Mesa Gunnison Sage Grouse Partnership

Last Revised: 24 May 2000

GUNNISON SAGE GROUSE CONSERVATION PLAN PIÑON MESA, COLORADO
Final Plan

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PREAMBLE

Sage grouse are restricted to sagebrush rangelands in western North America and occur nowhere else in the world. Their distribution and abundance have markedly decreased and the species has been extirpated from at least 5 states and 1 province, and their long-term existence in at least 6 states and 2 provinces is uncertain. This uncertainty has resulted in public discussion of classifying sage grouse as federally threatened or endangered. Complicating the concern about status of sage grouse is the recent description of a new species of sage grouse from southwestern Colorado and southeastern Utah, the Gunnison sage grouse. This newly described species has a limited distribution in Colorado (Figure 1), a relatively small population size, and may become a candidate for federal listing as threatened or endangered. Five listing factors (Appendix D) are considered by the U.S. Fish and Wildlife Service (USFWS) in evaluating possible action under the Endangered Species Act.

Gunnison sage grouse are known to occur in 9 highly fragmented populations in scattered localities in southwest Colorado and southeast Utah. The largest area of contiguous distribution and, consequently, population size of this new species is in the Gunnison Basin, Colorado. One of the populations is no longer viable (Sims Mesa, less than 10 birds), another (Poncha Pass) is the result of a transplant, 2 others, Dove Creek and Monticello are undoubtedly linked (2 states), while 1 (Cimarron) is marginal (less than 50 birds). The population at Piñon Mesa is estimated to be at least 75-100 birds. The Crawford population, while small (225 birds), has increased since 1994 and probably has a relationship with the larger population in the Gunnison Basin.

Conservation plans provide unique opportunities for partnerships involving resource agencies, private groups, and individual landowners to work jointly for more effective conservation of candidate species and land management. Presently, conservation plans have been completed for Gunnison sage grouse populations at Crawford, Dove Creek, Dry Creek Basin/Miramonte, Poncha Pass, and the Gunnison Basin, and are being implemented. The goal is to have conservation plans for each of the populations that are believed to be viable. Hunting is presently allowed under tight restriction only in the Gunnison Basin with none of the other populations being hunted nor considered for future hunting opportunities.

This conservation plan addresses the 5 USFWS listing factors, and describes and sets forth a strategy for long-term management of the Gunnison sage grouse in concert with other resource values and land uses at a landscape scale. It is the intent of the Piñon Mesa Sage Grouse Partnership to frequently communicate with other Gunnison Sage Grouse Work Groups to seek and exchange information as progress is made on implementing the conservation actions. Participation by private landowners in this conservation plan will be strictly optional on a volunteer basis.

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I. INTRODUCTION

Piñon Mesa is at the northwest end of the Uncompahgre Plateau in west-central Colorado. The area is known widely for its scenic qualities, abundant wildlife, and diverse vegetative communities. The relatively small human population has left much of the countryside in its native characteristics which offers expansive views of western Colorado and eastern Utah. Generally, the land is used for livestock grazing. In the past, domestic sheep were grazed, but today most of the ranches maintain cattle as the primary livestock.

The area where Gunnison sage grouse presently occur or have been found in the past is commonly referred to as Piñon Mesa or Glade Park and the terms are often used interchangeably. Glade Park is usually considered to be lands at lower elevation on the north half of the area, in and around the Glade Park store, but extending west to Fish Park near the Utah state line. Piñon Mesa, at higher elevations, is considered to be in the central to southern portion of the area. For this plan, the entire area will be referred to as Piñon Mesa, since this area presently supports the largest portion of the Gunnison sage grouse population in this area.

For centuries the Gunnison sage grouse, sometimes called a sage hen, has made its home in this area. Populations most likely fluctuated over the years in response to the ebb and flow of natural fires that formed the necessary sagebrush communities that are essential to these birds. At times in the past, the habitat must have looked somewhat different than its does presently. For the sage grouse to survive, it is assumed that the vegetative communities must have been more open, with less piñon-juniper woodlands and perhaps fewer areas dominated by oakbrush and serviceberry. In fact, the isolated populations of Gunnison sage grouse that exist today in southwest Colorado were likely connected in a web of sagebrush that allowed for movement of birds between populations which allowed for genetic intermingling that contributed to the characteristics in the birds we see today. At some point in the past (estimated at 300,000 years) these birds separated from their sage grouse relatives to the north and evolved to where these birds are considered a separate species today.

In the recent past, records shows that sage grouse populations had a wider range than we see today on Piñon Mesa. Glenn E. Rogers, a CDOW biologist, reported active grouse leks south and west of the Glade Park store in the 1960s, and members of the Mesa County Audubon Society reported seeing birds near historic lek sites near Thompson Reservoirs up until a few years ago. Local ranchers have also reported seeing sage grouse in the last 10 years. Intensive studies by the CDOW in the mid-1990s tend to support the theory that the bird•s range is contracting, with only the most favorable habitats on Piñon Mesa being used today. No confirmed sightings have been recorded near the Glade Park store portion of the Mesa for more than 10 years. It is probable that viable populations of the birds have vanished from this area. Fragmentation of habitats by urban growth and progression towards older-aged vegetation appears to be the primary reasons for the decline.

II. THE PLAN AND ITS PURPOSE

This conservation plan establishes a process and puts in place a framework that will guide a coordinated management effort at a landscape scale directed at improving sage grouse habitat and reversing the long-term trend of declining numbers, while continuing to optimize management for the other resources. Central to this process is landowner, community, and agency involvement in determining appropriate management activities designed to meet jointly developed goals and objectives.

The plan is designed to be dynamic and flexible, allowing new information and issues, as well as results from previous conservation efforts, to be incorporated as necessary. It is also designed to answer questions and collect data for future resource management decisions.

Guiding Principles

This process is designed to guide sage grouse and other resource management efforts, particularly developing goals, objectives, and the selection of conservation actions and the way in which they are implemented across jurisdictional/ownership boundaries. They are:

1. Landowner and public involvement is essential in all planning and management decisions.

2. Maintain an atmosphere of cooperation and participation among land managers, private landowners, and other stakeholders.

3. Implement conservation actions in ways that meets the needs of sage grouse and other resources, and are least disruptive to, and encourages the development of a stable and diverse agricultural base in the area.

4. Respect individual views and values and implement conservation actions on a collaborative basis in ways that have broad community support.

5. Make every effort among partners to seek efficiency and integration of efforts, and to select conservation actions that also promote other land health or resource management objectives whenever possible, especially among agencies in the implementation of conservation actions.

6. Active management of the habitat on Piñon Mesa is essential for the perpetuation of sage grouse populations. The elimination of planned management and manipulation of habitats is not desirable and closing of lands to management would adversely impact sage grouse, present agricultural practices, and other wildlife populations.

III. SPECIES DESCRIPTION, DISTRIBUTION, AND POPULATION MONITORING

A. DESCRIPTION

Gunnison sage grouse are large (2.4-5.0 lbs) brownish gray birds, sometimes called a sage hen due to its resemblance to domestic chickens. The grouse have narrow pointed tails, feathering to the base of the toes, and a diverse pattern of grayish brown, buff and black on the upper body. The flanks are pale gray and white, and there is a large dark patch extending across the lower breast and abdomen. Adults have dark green feet and toes. In early fall, a comb-like fringe appears along side each of the 3 toes which then act as snowshoes for walking on deep snow. These fringes are shed in the spring. Males are larger and more colorful than females and have a black throat and bib, and white feathers along the sides of the neck. Males also have 2 large, frontally directed air sacs of olive-green skin that they inflate during breeding displays. Both sexes have yellow-green eye combs, but these are less prominent in females.

Gunnison sage grouse, in southwestern Colorado, differ from sage grouse found in northern Colorado in size (males are 3.5 to 5.0 lbs, vs. 5.5 to 7.2 lbs in northern Colorado; females are 2.4 to 3.1 lbs vs 3.3 to 4.0 lbs in northern Colorado), bill shape and size, and tail patterns (larger, more distinct white barring of tail feathers). Also, the difference in behavior and calls between the Gunnison and large-bodied sage grouse in Northern Colorado are striking.

B. DISTRIBUTION

Two races of sage grouse have been described with the Western race occurring in west-central Oregon and Washington and the Eastern race from eastern Oregon east, north, and south throughout the described distribution. More recently, a third group of sage grouse has been described from the Gunnison Basin, Colorado. This group differs from all other sage grouse populations studied by being significantly smaller in size, having different breeding behaviors and specialized feathers, and having a markedly narrow (one) range of genetic haplotypes. The present distribution of the Gunnison sage grouse is south of the Colorado-Eagle rivers in

Colorado extending east to the San Luis Valley. It also occurs east of the Colorado River in extreme southeastern Utah near Monticello.

C. POPULATION MONITORING

Counts of male sage grouse on leks provide wildlife managers with an estimate of minimum population size. Studies across western North America indicate there are about 2 females for each male in the spring population. Thus, if the number of males is known it is possible to calculate a minimum population size. It is important to recognize that a count will not represent all males in the population and that any calculated population estimate will be lower than the actual population size.

Personnel of the CDOW inventoried leks starting in the 1950s to document sage grouse presence and general trend within specific areas of western Colorado. Thus, locations of active leks and counts of males on leks were recorded. Generally, only accessible leks were counted and intensive searches for new or relocated leks were not made because of manpower and equipment priorities. Searches and counts were sporadic as firm procedures were not in place. Consequently, lek count data prior to 1995 for Piñon Mesa reflect only general trends in the sage grouse population. Procedures changed in the mid 1990's and now follow standard protocols. Sage grouse were counted on leks in Glade Park (leks 1-4) in 1958-1960 with 0 to 6 males/lek and Piñon Mesa (leks 1-2) with 0-17 males/lek. No other lek count data for this area are known to be available until 1988 and 1995-2000.

IV. THE PIÑON MESA AREA ENVIRONMENT

A. GEOGRAPHY

The area can be broadly divided into 2 sub-units: These include, Glade Park, north and west of the Glade Park store, and Piñon Mesa at higher elevations, rising to the south and west of Glade Park. The area is also sometimes called either Glade Park or Piñon Mesa and terms are often used interchangeably (Figure 2). Glade Park is at the extreme northwest end of the Uncompahgre Plateau. The topography varies greatly and highest elevations are near the center of the area and from there elevation decreases in all directions. It is noted for its canyon country, which is conspicuous near the area•s borders. The highest elevation is around 9,800 feet on Piñon Mesa. The lowest elevation is about 4,600 feet where the Colorado River meets the Utah State line.

Sandstone canyons are one of the dominant geologic features in this area. The Colorado National Monument just southwest of Grand Junction is noted for its expansive sandstone canyon system. The interior portions of Piñon Mesa are composed of mesas and canyons, but the general terrain is less fragmented and more open in nature.

The Little Dolores River is the main drainage that originates in the area. Due to the significantly higher elevations in the center of the area, considerable moisture falls throughout the year and perennial streams are not uncommon. There are no large natural lakes in the area. Small reservoirs have been constructed for livestock and irrigation water and for municipal use by the town of Fruita.

B. VEGETATION

Vegetation in this area varies due to the wide range of elevations that occur. At lower elevations, the vegetation is typical of most semi-arid regions in western Colorado. Saltbush, sagebrush, and greasewood are common shrub species in the open desert areas. Piñon-juniper woodlands dominate on the lower and intermediate slopes throughout the area. Oakbrush occurs in the piñon-juniper woodlands at higher elevations. A combination of sagebrush and snowberry occurs in open areas in the oakbrush zone at intermediate and higher elevations. Higher elevations, which receive substantially more moisture, have considerable aspen and spruce-fir forests.

Vegetative communities grade into each other in response to slope, aspect, and moisture conditions forming a mosaic pattern. In portions of the area, ponderosa pine is a dominant tree and some mature stands have been harvested for timber in the past.

Irrigated grasslands interspersed with shrub mixtures and grass/alfalfa meadows occur at lower elevations in the valleys. Cottonwood, willow, sagebrush, and greasewood are common in riparian areas throughout the area. Other riparian species include boxelder, tamarisk (salt cedar), and alder.

The vegetation in the area has been extensively managed for sustained livestock forage production. Cattle grazing occurs throughout the area and historically domestic sheep were grazed in significant numbers. However, today domestic sheep occur in only a few small flocks on small ranchettes.

The vegetation in the area has been influenced by man•s management practices, agricultural and livestock production, and recreation. Natural fire has been excluded from many portions of the unit for many years. However, several large wild fires have occurred in the last 10 years, mostly in the southwest portion of the area near the Utah state line. One large fire occurred during 1989 in the Clark Wash area near the Glade Park Store. These lightning-caused fires burned extensive stands of mature piñon-juniper woodlands. Piñon-juniper invasion of the sagebrush steppe due to the lack of fire is a significant concern and is influencing wildlife populations in the area. In some areas it is reducing the amount of forage produced by shrubs, grasses, and forbs.

C. PIÑON MESA SAGE GROUSE AREA BOUNDARY

The Partnership considered possible boundaries for the Gunnison sage grouse population that historically and presently use the Piñon Mesa area. Delineation of an area boundary was based on known historic use sites and sage grouse observations, as well as the present potential of remaining sagebrush-dominated habitats (Figure 3). Areas with rural dwellings are included within the boundary. While this was necessary to include all areas with potential for habitat development to benefit an expanded Gunnison sage grouse population, no inferences on future changes in present land uses are inferred by the boundary delineated. Participation in this plan on the part of landowners is strictly voluntary.

Generally, Black Ridge forms the northern boundary of the area. The northern boundary continues eastward along the southern boundary of Colorado National Monument to the Tabegauche Trail. From there, the Tabegauche Trail drops south and forms a portion of the east boundary with the remaining portion being a continuation of a north-south line paralleling the trail down to Unaweep Canyon. Unaweep Canyon is the southern boundary and is a well known geologic feature. This canyon is broad, steep-sided and composed of both granite and sandstone formations. It is unique in that its highest point is near the canyon•s center and water drains from this site along East and West creeks. The Dolores River flows for a short distance along the southern boundary near the town of Gateway, Colorado. The Utah State line is the west boundary. However, Gunnison sage grouse inhabit the western portion of Fish Park, which lies in Utah.

D. SAGE GROUSE POPULATION AND HABITAT STATUS/DISTRIBUTION

Population Status:

The present (1997-99) size of the breeding population of sage grouse in the Piñon Mesa area is estimated to be between 78 and 123 birds based on 26 males counted on 4-5 active leks (1997-99) (3 year average) on which males were observed (Appendix E). This range is based on knowledge that there are about 2 hens/males in the spring population (26 males + 52 hens = 78). Thus, there were at least 78 sage grouse in the Piñon Mesa area in May 1999. However, this estimate may be conservative as it has been repeatedly demonstrated that not all males are on leks at one time to be counted and, also, that locations of all active leks may not be known. Given the terrain and early spring access in this area, it is probable that not all active lek areas were known and counted in spring 1997-99. If we assume that locations of 90% of all leks were known, there could be 1 unknown active lek

(if 5 active leks = 90%, then 5) 0.90 = 5.5 active leks would constitute 100% of all active leks). To reach an upper estimate of population size, the 5.5 calculated active leks was rounded to 6.

Given an average of 26 males counted on 5 active known leks, there would be 31 males on 6 active leks (26) 5 = 5.2 males/active known lek x 6 assumed leks, 6 x 5.2 = 31.2 rounded to 31). Further, given that not all males associated with a lek are counted on one count day, it is reasonable to assume the actual number, based on data from radio-marked males, lies between 50 and 100%. Assuming this percentage to be 75, there would be 41 males (31 [on 6 possible leks]) 75% present during the high count = 41). Thus, if there are 2 hens/male in the spring population, the upper estimate for the population would be 123 (41 + 82 hens = 123).

There are problems with both lower and upper estimates as sex ratios may be closer to 1:1 (one male for every female) in unhunted populations and all active lek sites may be known and counted. However, it is probable that the true population number lies within the range calculated and, most likely, is closer to the lower estimate.

The spring population size of sage grouse at Piñon Mesa has been considerably higher in the recent past (34 males counted in 1959 on 3 active elks). These numbers, using the same assumptions, would indicate a spring population size of at least 102 birds (34 males + 68 hens) and possibly as high as 264 birds (34) 3 = 11 x 6 total leks = 66 males) 0.75 = 88 + 176 = 264). Thus, population size has decreased from 1959 (102-264, 11 males/lek) to 1997-99 (78-123, 5 males/lek). This is a 54% (11 - 5 = 6) 11 = 54.5%) decrease based on mean number of males counted on leks.

Habitat status: It is believed that the decline in the Piñon Mesa sage grouse numbers reflects a larger decline in the condition of the natural landscape in this area. Past management activities including fire suppression and selective livestock grazing appear to have created conditions suitable for establishment of young piñon and juniper trees which are slowly encroaching into sagebrush areas on the landscape, as well as creating old-age, dense shrub growth. Assessment of the potential natural disturbances in the area indicates that the plant communities and grouse evolved under a system of fairly frequent, low intensity fire and primarily dormant season grazing and browsing by native ungulates. This would have led to a highly patchy landscape with many different age groups of vegetation and high levels of herbaceous growth and ground cover. Sage grouse habitat objectives in this plan represent small steps toward this more functional landscape pattern, and are compatible with a move toward greater landscape health.

Specific habitat problems identified by the Partnership are: 1) In the Glade Park area, fragmentation of habitat components, i.e., too much distance between nesting and brooding areas, and wet areas and by housing development; 2) invasion of piñon and juniper into the sagebrush areas throughout most of the area; 3) not enough grass and forbs in the sagebrush understory in Glade Park; 4) low vegetative age class diversity throughout the area (a homogeneous old age stand exists); 5) low vegetative vigor, particularly in Glade Park; 6) poor vegetative conditions on leks (too much vegetation greater than 8" high); and 7) a short supply of wet areas and water sites in Glade Park.

Population and Habitat Distribution: It is believed that historically Gunnison sage grouse occurred in all suitable sagebrush habitat in the Piñon Mesa area. Thus, based on the existing location of sagebrush, suitable soil types that may have supported sagebrush in the past, and the knowledge of present sage grouse use areas, the probable historic and present distribution of sage grouse was developed (Figure 3 and 4).

Four types of sagebrush occur on Piñon Mesa. Silver sage is the dominant species on Piñon Mesa where a large portion of the occupied sage grouse range occurs. In this area, some mountain big sagebrush is scattered among the silver sage on elevated, dryer, rocky sites. Silver sagebrush is used by sage grouse extensively along both sides of the MS road on upper Piñon Mesa. However, it is considered to be less palatable than mountain big sagebrush to sage grouse. Thick stands of snowberry occur in conjunction with silver sagebrush on Piñon Mesa. Both silver sage and snowberry are fire tolerant species. On the mesas extending north of the MS road, such as Payne Mesa, mountain big sagebrush is the dominant sagebrush. Mountain big sage is important for the

Gunnison sage grouse and is the preferred forage species. It is considered to be the most important winter food for sage grouse in this area.

Basin big sagebrush occurs more commonly in the Glade Park area and usually occurs along drainages and often, fence lines. It grows up to 10 feet high and is a dominant shrub along many of the small, dry washes and gulches. Basin big sage provides little habitat for sage grouse.

Black sagebrush is found scattered throughout the area. It tends to be found in dryer and sometimes rocky areas. One area where black sage is found is near Unaweep Canyon on Snyder Flats and this area is considered to be historic range for sage grouse. Some black sage is found northeast of Payne Mesa in the upper portions of the Little Dolores River drainage.

The CDOW believes from recent inventories in the eastern Glade Park area that a viable population of sage grouse no longer exists there. No birds have been observed at identified lek sites and extensive work by Chris Woods (CDOW temporary research worker) in 1995 revealed no observations of sage grouse. In the past, the eastern Glade Park area most likely supported a year-round population and may also have functioned as winter range for birds which migrated back and forth from Piñon Mesa. This is speculation, but migratory movements of similar distances presently occur in the Dry Creek Basin/Miramonte population of Gunnison sage grouse. Migratory movements of this type may have benefited the Piñon Mesa grouse, allowing breeding and brood rearing at higher elevations and increased winter survival by moving to lower elevations where snow depths were less and forage more widely available.

Sage grouse numbers at Fish Park, near the Utah/Colorado state line have declined to very low levels and may have reached a point that a viable population no longer exits there. One bird was observed at Fish Park in 1998 and none in 1999. No birds have been observed on the lek since 1995. Very limited numbers of sage grouse have been observed using hay meadows along the DS road near the point where it intersects the Utah state line. Apparently, the birds observed here are feeding on vegetation and insects in the alfalfa fields in summer and fall. One bird was observed on the Van Loan ranch on 2 different occasions during summer 1998 in hay meadows. In 1995, radio-marked birds moved from Fish Park to the Van Loan ranch during the summer.

The sagebrush habitat in the vicinity of Lower Bieser Creek south of the junction of DS and 5.7 roads supported a grouse population until the early 1980s. At that time, local landowners observed approximately 10 grouse displaying on one lek site for an unknown number of years. No birds have been observed in this area since that time and it likely is no longer used by sage grouse. However, this area has potential and could support grouse in the future with the development of suitable habitat.

Evidence of sage grouse (cecal droppings) was located in the area north of Renegade Point during the summer of 1998 (V. Graham 1997, pers. observ.). Although a historic lek site is located in the area, no use has been observed at this lek in many years. However, sage grouse were observed and photographed in this area in 1997 There may still be birds using this area at an unknown lek or perhaps moving into this area for nesting and feeding during the summer. The recent Triangle Fire in Summer 1995 may have positively impacted sagebrush habitat in the Upper Spring Creek/Hog Back area by reducing piñon/juniper woodlands and opening up and thinning dense mountain shrub communities. Mountain big sagebrush appears to be recovering in portions of the area burned by the Triangle Fire.

Currently, the primary sage grouse use area is in the Piñon Mesa area west and northwest of the Grand Mesa National Forest boundary. The majority of the use occurs in the open rolling sagebrush habitat from 2-V Basin east to the National Forest Boundary. The grouse also use the small mesas and benches that lie between the creeks running generally northward including Nelson Creek, Sheep Creek, Tommy Dodson, and Payne Canyon and the Little Dolores River. Sage grouse are also found north and south of the MS road in the open sagebrush in Luster Basin, the headwaters of the North Fork of West Creek, and the Fish Creek area. There is some evidence from local ranchers that the Gunnison sage grouse exists in the Snyder Flats area north of Unaweep Canyon. No use is presently known to occur in Unaweep Canyon although it was probably used in recent times.

Elevation on Piñon Mesa ranges from about 7,500 to about 9,800 feet. Only 1 lek area is known to be active along the MS road at higher elevation. Another known active lek area (composed of 3 alternate sites) is west of the headwaters of the little Dolores River. The third known lek area on Piñon Mesa lies north of the MS road in the headwaters of Nelson Creek. All known, active leks are on private land within this area.

E. HABITAT REQUIREMENTS OF THE GUNNISON SAGE GROUSE IN THE PIÑON MESA AREA

Habitat needs for sage grouse in the Piñon Mesa area relate to over winter survival (Nov-Mar), escape cover adjacent to lek sites (Mar-May), nesting cover (Apr-Jun), early brood-rearing habitat (May-Jun), late brood-rearing habitat (Jul-Aug), and fall habitat (Aug-Oct). Of these habitats, winter, nesting, and early brood rearing are most important with suitable escape cover near leks of near equal importance.

Winter Habitat: Little is known regarding winter habitat use by sage grouse on Piñon Mesa and probable ranges can only be estimated (Figure 4). The birds most likely move from the top of Piñon Mesa to lower elevations where more sagebrush is exposed and available for food. This movement is likely dependent on winter severity and snow depths. Dryer winters with less snow may allow the birds to winter at higher elevation, while harsh winters with deep snow may force the birds to move to lower elevations. It is thought that areas such as Payne Mesa and other small mesas in this same general area at about this same elevation serve as wintering sites. Most of the sagebrush at this elevation is mountain big sage, which is suitable winter forage. It is speculated that sage grouse may have wintered in Unaweep Canyon, Glade Park, Trail Canyon, Fish Park and other similar habitats at lower elevations. Perhaps Snyder Flats, due to its lower elevation, may be used by wintering grouse, since it likely has more exposed sagebrush available during these months. The small amount of suitable winter habitat may be a limiting factor for this sage grouse population. In winter 1995-96, radio-marked sage grouse were known to be on Payne Mesa.

Lek Habitat: There appears to be adequate habitat available for display on Piñon Mesa, but many suitable sites appear to be overgrowing with heavy stands of silver sage and snowberry. At least 6 formerly active leks are no longer occupied. Piñon-juniper invasion and loss of suitable nesting habitat that changed the structure of the sagebrush community is the probable cause for loss of these lek sites. Most sites presently used for display are those that are open and where salt is provided for cattle. These same sites were once used as domestic sheep bedding and salt grounds. Intensive use of the salting sites by cattle tends to keep the area open and free of mountain shrubs. Interestingly, the Pond Lek site on Payne Mesa is surrounded by tall juniper trees and oakbrush (greater than 15 ft). This vegetation is relatively thick and grouse have been observed displaying under the taller oakbrush which is adjacent to the opening created by the cattle salting site. There is little ground cover at this lek during the spring when males are displaying. The other occupied lek sites are more open and are dominated by big sage and silver sage surrounding the lek opening.

Nesting Habitat: Little is known regarding sage grouse nest site selection on Piñon Mesa. It is known that most nesting usually occurs within 2 miles of the lek site. All of the currently used lek sites have suitable nest cover in close proximity to the leks. For nesting, taller, more dense sagebrush (greater than 18 inches high and greater than 25% canopy cover) with scattered deciduous shrubs is very important for the birds. These sites are usually at higher elevations where increased moisture allows greater and more robust grass and forb cover (greater than 25 and 8% respectively, greater than 6-8 in. total herbaceous height). Nests are typically at the base of taller (greater than 18 inches) sagebrush plants. Research indicates that typically 80% of nest sites are within 2 miles of the lek.

Early Brood Habitat: The description of this habitat at hatch is identical to nesting with hens moving their young chicks (less than 5-10 days of age) into areas dominated by forbs and grasses with less than 20% live sagebrush canopy cover. Hens select open or disturbed sites in the sagebrush that have abundant forbs and higher moisture levels. Grasses and forbs dominate at all known use sites with a definite preference for live sagebrush escape cover (greater than 18 in. height). Good brood habitat is apparently found in and surrounding 2-V Basin and also immediately east of this area along both sides of the MS Road. In this area, local ranchers and CDOW personnel have made numerous observations of hens with broods. The vegetation is dominated by dense stands of silver sage and snowberry. It has high moisture levels and probably provides some moist

openings which support forbs and good insect populations. The insects are important for young grouse; they provide high protein necessary for rapidly growing chicks.

Late Brood Habitat: Hens with older broods prefer moist sites near stockponds, upper drainages, and on north slopes depending upon elevation and site. Forbs and grasses dominate at preferred use sites with some live sagebrush and other deciduous shrubs (snowberry, serviceberry, Gambel oak). Shrub cover is important for escape while most foraging is on forbs.

Fall Habitat: Sage grouse of all ages and gender continue to use habitats identical to those used by broods in July and August until plants become dried out (several successive killing frosts) or heavily grazed. Taller sagebrush (greater than 20 inches high) with more canopy cover (greater than 20%) becomes more important. Use increases of north and west facing slopes and diets change gradually from a high proportion of forbs to a high proportion of sagebrush. During extensive snow cover, in late fall and early winter, use of mountain big sagebrush stands is extensive.

V. CONSERVATION STRATEGY

A. PIÑON MESA AREA GOALS AND OBJECTIVES

To guide management efforts of the Partnership in securing the long term status of the Gunnison sage grouse and meeting the needs of the other resources, involved groups, and individuals, the following goals and objectives were developed.

Overall Goal: Increase sage grouse numbers and distribution in the Piñon Mesa area while maintaining current ranching uses and a healthy landscape.

Sage Grouse Population Goal: Maintain a sage grouse population size in the Piñon Mesa area that is in balance with the carrying capacity of the habitat, striving for a minimum spring population of at least 8 active leks (7 on Piñon Mesa, 1 on Glade Park) each with 15 males that are counted during spring lek counts. Thus, 120 males would be counted on 8 active leks (8 leks x 15 males/lek =120) which would represent a total male population of 160 (120 males counted) 0.75 of those present = 160) and a hen population of 320 (2 x 160) for a total spring population of 480 birds. This would be an optimum number to achieve within the next 10 years. If a population of 300-500 grouse could be achieved in 10 years, it would represent a reasonable population goal. Presently, it is felt by many wildlife managers that a population of about 500 birds would be sufficient to maintain a population for at least 25 years. The minimum population goal is that level, 78 to 123 birds, measured in 1997-99 (3-year average).

Sage Grouse Habitat Goal: Maintain and improve, on suitable sites across the Piñon Mesa landscape, relatively large, contiguous stands of sagebrush with a variety of vegetative conditions interspersed throughout, in the desired arrangement with good connectivity to provide the quantity and quality of sage grouse habitat to support the desired optimum population level by 2010.

Populations are basically products of the environment, or habitat in which they are found. Thus, habitat quality is an indicator of how well habitat meets the needs of sage grouse. Also, the health of the natural system in which populations exist, and its ability to function in a dynamic manner through time largely determines its capability for long-term sustainability. Time, space, a focus on the natural processes and their ability to function, and the relationship with surrounding communities are of primary importance and concern in achieving the habitat goal of this plan.

B. GENERAL CONSERVATION OBJECTIVES

Using these goals as a target, the Piñon Mesa Partnership identified 3 dominant themes or categories; 1) habitat quality, 2) habitat loss/fragmentation, and 3) physical disturbance to the population, for which general conservation objectives were developed. Specific objectives were developed for habitat quality. These objectives were developed largely based on the issues and/or factors identified as in some way contributing to

the static or declining population size of sage grouse or affecting the quantity or quality of sage grouse habitat in the Piñon Mesa area.

The purpose of these objectives is to guide the selection of conservation actions. These objectives are also useful to explain the overall thrust of the conservation strategy. These objectives are:

Habitat Quality: Maintain and/or improve the quality of sage grouse habitat.

Description: Habitat quality is an indication of how well habitat meets the needs of sage grouse. Habitat in poor condition is of lower quality than habitat which is in good condition because higher quality habitat provides more of the essential components such as food, water, and cover. Generally, the group of factors that affect habitat quality and/or fragmentation (discussed in the following section) are considered to be the most important to sage grouse recovery.

Specific Objectives: (Habitat Vegetation)

Leks:

Habitat Function: Used for display and mating, require good acoustics and visibility for display activity, and for predator detection.

Location: Within at least 300 yards to • mile of nesting habitat. Within 200 yards of escape cover (large expanses of sagebrush). Typically in broad valleys or benches, broad ridges or mesas. At least 200 yards from trees or other potential raptor perches.

Size: 1-5 acres.

Shape: Irregular, but usually circular or short and linear.

Time of use: Mid March to early June.

Composition: Perennial grass cover greater than 20%.
Total sage cover less than 10%.
Total forb cover greater than 10%.

Structure: No trees or deciduous shrubs greater than 3 feet tall.
Grass and forb height 5-10 inches.
Sage up to 15 inches.

Near Lek Areas:

Habitat Function: Provides escape cover for displaying males, visiting females, resting birds.

Location: Within 200 yards of lek.

Size: Greater than 1 acre up to 40-60 acres.

Shape: Irregular, if linear, then greater than 200 yards in width,
if patches, then greater than 200 yards in diameter.

Composition: Perennial grass cover greater than 20%.
Total shrub cover (sage + mountain shrubs) 20-30%.
Total forb cover greater than 10%.

Structure: Sagebrush and other shrubs greater than 15 inches tall.
No potential raptor perches.

Nesting/Early Brood Rearing Areas:

Habitat Function: Provides good hiding and nesting cover and high levels of insects and succulent forbs to meet brood rearing nutritional requirements.

Location: Within 3 miles of a lek.

Size: Overall nesting area greater than 10 acres made up of 1/4-1 acre patches of sage ranging from dense to sparse.

Shape: Need high level of interspersion within heavier sagebrush areas.

Time of use: April through July.

Composition: Patchy: **Foraging areas:**
Total sage cover less than 20%.
Total forb cover greater than 15%.
Total grass cover greater than 25%.
Hiding areas:
Total sage cover greater than 25%.
Total forb cover greater than 10%.
Total grass cover greater than 20%.

Structure: Sagebrush greater than 18 inches tall.
Abundant standing herbaceous material.
Herbaceous average height greater than 8 inches.

Late Brood Rearing Areas:

Habitat Function: Provides moisture and high levels of succulent forbs and insects, as well as hiding cover. Typically edges of hay meadows, riparian areas, ponds, seeps, drainage bottoms.

Location: Near stands of live sagebrush or other deciduous shrubs close enough for escape.
Less than • mile from early brood rearing areas, often north slopes.

Size: Greater than 100 yards, usually around 200 yards wide.

Shape: Irregular, frequently linear, high interspersion of stand and cover types.

Composition: Sagebrush less than 20%.
Total shrub cover less than 25%.
Perennial grass cover greater than 25%.
Perennial forb cover greater than 15%.

Structure: Herbaceous vegetation greater than 10 inches tall.

Fall and Winter Habitat:

Habitat Function: Provides thermal and hiding cover, abundant supply of taller sagebrush (15-25 inches).

Location: Usually broad basins, ridges, and north to northwest facing slopes.

Size: Extensive stands of sage, usually in patches larger than 100-2200 acres.

Shape: Interspersion of shorter stands of sage (ridges) with taller stands (swales, valley bottoms).

Composition: Total sage cover greater than 20% (25-30% preferable).
Total forb cover greater than 10%.
Perennial grass cover greater than 15%.

Structure: Tall sage 15-25 inches.
Shorter sage greater than 10 inches.

Habitat loss/fragmentation: Reduce fragmentation by preventing, minimizing, and mitigating past, present, and future loss of sage grouse habitat.

Description: Loss of sage grouse habitat refers to areas that once provided habitat, but no longer do because that habitat no longer exists or is not available. It should be thought of as a permanent loss in the area. Another example of habitat loss occurs when a subdivision occupies an area that once was a sagebrush community.

Fragmentation refers to the distribution or location of habitat in terms of its physical position or connectiveness.

Physical disturbance to the population: Identify and manage physical disturbances to reduce adverse effects to sage grouse.

Description: This refers to the physical disturbance to sage grouse, the birds themselves. Physical disturbance can result in sage grouse death or exert stress particularly if disturbance occurs during biologically critical periods or times.

C. ISSUES OR FACTORS THAT AFFECT SAGE GROUSE POPULATIONS AND THEIR HABITAT

The following issues and concerns were identified during the development of the Piñon Mesa Conservation Plan. All issues were treated equally and no limitations were placed on what could be proposed as a concern. Thus, a long and varied list of concerns and possible reasons for the Gunnison sage grouse decline was developed. The issues and concerns are listed in no particular order. The issues listed may not include all the issues discussed and some issues may not be resolved and are out of the scope of the plan.

Issues That Effect Sage Grouse Populations and Habitat

Vegetative Habitat:

Habitat quality and quantity---The major factors that drive sage grouse populations are quality and extent of habitat. No other bird is so habitat specific to one particular plant type (sagebrush) in meeting its annual life requirements. Size of habitat is important because sage grouse move seasonally between suitable habitat types. Sage grouse are unable to adjust their life processes to fit a pattern of land use that eliminates or adversely disturbs large tracts of sagebrush.

Grasses and forbs---There is concern among ranchers regarding the quantity of residual grass that is recommended for optimum sage grouse habitat. Ranchers make every effort to manage their lands in a manner that meets their ranch livestock production objectives. This includes management of the vegetation for optimal production to support livestock and includes maintenance of healthy plant communities that also support wildlife. In some years, weather reduces forage production and at times livestock interests may negatively impact optimum sage grouse habitat. This is a reality of land management and wildlife managers should be aware of circumstances involving ranch management and its relationship to sage grouse management. Annual rotation of pastures for livestock grazing may offer potential in some areas such as Fish Park and on private lands. The rotation system would allow for ungrazed pastures for grouse production. Poor nest and brood survival has been attributed to the lack of herbaceous understory within the sagebrush community. Since grouse initiate nesting prior to spring herbaceous vegetation growth, it is constructive to try and maximize herbaceous residue from the previous year.

Condition of winter habitat---Winter habitat is critical to sage grouse because without sufficient areas of exposed sagebrush they cannot survive the winter to reproduce in spring. Although sage grouse are widely distributed in winter, suitable winter feeding sites do not constitute a large proportion of the available land area. Despite improvements made to other habitat types, sage grouse will not survive unless their wintering areas are protected from fragmentation or factors that destroy or degrade them. There may be potential for winter range development in lower areas examples include Fish Park, Spring Creek Hogback, the Little Dolores River, and BLM lands in the vicinity of the junction of 5.7 and DS roads.

Management of habitat improvement projects---It needs to be recognized that habitat improvement projects that benefit sage grouse may not be the same as those practices selected by private landowners for their livestock management programs. An example would be brush beating sagebrush. For sage grouse, brush beating 1/3 of the habitat in need of management may not be in the best interest for livestock management. Ranchers may be foregoing maximum livestock benefits for practices that benefit sage grouse. Other concerns of ranchers include the practice of leaving about 6"-8" of sagebrush stubble in brush beating projects for best sage grouse benefits, and limitations on use of fire as a range improvement technique, particularly in sagebrush and piñon-juniper habitat. Cooperatively funded projects with CDOW and BLM may offset and compensate landowners for their consideration of sage grouse land management practices.

Fire suppression---Wildfires are natural with effects that vary depending upon size of burned areas and the intensity and severity of the fire. For many decades, public land management agency policy was to

suppress all natural and man-made fires. Controlling and preventing fires may have resulted in degraded habitat conditions for sage grouse. There may be potential for the use of limited controlled burns to reduce piñon-juniper encroachment in selected locations. Presently, there are piñon-juniper ridge lines and low ridge points that extend into sagebrush habitats that lend themselves to burning without endangering larger sagebrush areas. Controlled burn options should be left open for vegetation management practices that will benefit both livestock management and sage grouse management. Soil conditions should be assessed to assure these sites are suitable for recovery of sagebrush, grass and forbs. Extreme care should be taken so that large (greater than 200 acres) fires do not burn uncontrolled in critical sage grouse habitat.

Funding for habitat improvement---CDOW, Bureau of Land Management (BLM), Natural Resource Conservation Service (NRCS), and USFWS through PFFW as well as other potential sources for habitat improvement projects should be used to the maximum potential to assist in maintenance and improvement of sage grouse habitats. CDOW, BLM, and NRCS should provide technical assistance and information when requested by landowners to aid in habitat projects implemented to benefit sage grouse.

Mountain shrub management--- Gunnison sage grouse appear to be somewhat tolerant of oakbrush, however, the biological relationship is not well understood. Large oakbrush stands often provide some areas of grass production when mixed with sagebrush communities. Some extremely heavy stands of oakbrush may be treated (thinned) when appropriate. It is recognized that oakbrush will resprout after burning or cutting.

Land Planning/Mitigation:

Fragmentation---Habitat fragmentation occurs when areas of suitable habitat are fragmented and divided into smaller areas due to processes such as physical destruction or degradation. Any patch of habitat isolated by different habitats and/or unsuitable terrain may be considered fragmented. As habitat becomes increasingly fragmented, fewer individual birds exist. Sage grouse are especially sensitive to fragmentation because of their fidelity to lek, nest, winter, and brood-rearing sites. Even when their habitat is absent or degraded, they will continue to attempt to use these areas and will subsequently be exposed to higher mortality risks further reducing their population size.

Housing development---Housing development in the Glade Park area near the Glade Park store has severely fragmented sage grouse habitat. Currently, it is felt that as housing development occurs the chances of the area to be repopulated by sage grouse decreases. Small parcels are being fenced, new roads are being developed and power lines are being built to supply homes with electricity.

In the past, there were more homesteads with cabins than there are today on Piñon Mesa where sage grouse are currently found. Limited cabin development on Piñon Mesa may not impact sage grouse populations. Cabins are often placed in areas surrounded by either aspen or conifers for aesthetic reasons and in these instances impacts to sage grouse may be minimal.

Utilities:

Powerlines---The effects of power lines on sage grouse are severe. Powerlines have been documented to serve as predator perches in Utah and Colorado with subsequent loss of all leks visible to raptors (primarily golden eagles) from perches on power line poles. Further, counts of sage grouse pellets near power lines decrease as distance to power lines decrease up to one-half mile. Thus, a strip about one-half mile on each side of power lines is generally avoided by sage grouse. These observations are supported by measurement of distances to power lines of radio-marked sage grouse throughout sage grouse habitats in Colorado. Clearly, sage grouse avoid power lines when possible. Power lines have increased dramatically in the Glade Park area (immediately north and south of store) where sage grouse appear to have been extirpated. Housing development is the primary reason for the increase. No large-scale power lines are currently envisioned for the primary sage grouse habitat on Piñon Mesa.

Pipelines---No major pipeline development is currently being considered on Piñon Mesa. Pipeline development (construction) can be negative if not properly managed to avoid adverse effects to breeding (March-mid May), nesting (mid April-early July), and early brood rearing (mid May-mid July). However, reseeding of areas disturbed by pipelines with desirable forbs and taller grasses can be beneficial to sage grouse especially if the width of the area disturbed is minimal (less than 100 yards) and roads/trails used during construction are closed and reseeded after completion of the pipeline construction interval.

Roads---Currently, and in the foreseeable future, roads do not appear to be a major concern with sage grouse population on Piñon Mesa. However, if sage grouse populations can be reestablished in the vicinity of DS road, high speed traffic may impact grouse. All other roads in occupied habitat are not suitable for high speed traffic and roadkill potential is considered to be low. Roads can be classified as primary, secondary, and as trails. Primary roads are those that are classified as state and federal highways. These roads are generally high speed and are paved. Secondary roads generally have county designations although some BLM and USFS roads can fit in this category. Some of these roads may be paved but most are generally gravel or dirt. These roads have moderate to low speed ratings. Trails generally are unsurfaced, lack formal designation, and have low speed ratings. Sage grouse prefer to walk to reach useable habitats throughout the year except when snow cover increases their conspicuousness. Sage grouse that walk across primary and secondary roads are at great risk of death from moving vehicles. The end result of all primary roads and many secondary roads is reduction in the size of the sage grouse population as those birds adjacent to the road are killed by road traffic. Because young sage grouse learn from older sage grouse, populations that traditionally used areas prior to road establishment or improvement become smaller over time as the older (and young) birds become fewer in number due to road disturbance (and death). Thus, traditional movements are often eliminated. Trails have less impact, depending upon vehicle speed.

Fence designs---Fences are necessary for livestock management. However, wood fence posts can provide perches for predators of sage grouse. Also, sage grouse have been observed flying into fence wires, especially near preferred use areas such as leks. Fence management that reduces potential perch sites (metal posts) and allows larger spacing between wires (2 or 3 vs. 4 or 5) could be less negative for sage grouse.

Loss of Topsoil & Productivity: Soil erosion is not a major problem on Piñon Mesa. Erosion loss could occur after wildfires and rapid reestablishment of ground cover should be a primary consideration after fire. Some slumping does occur in this area, but is not widespread. Sandy soil exists in lower elevation sage grouse habitat such as Fish Park. Soil is the primary factor determining the potential for vegetation production of a given site. With reduction of the herbaceous understory cover in sagebrush ecosystems, soils have become more vulnerable to wind and water erosion.

Timing, Intensity, and Duration of Livestock/Big Game Grazing: Potentially, timing and intensity of livestock/big game grazing may affect sage grouse nesting and brood rearing success. The peak of sage grouse hatch is the last week in May and the first week in June, depending on weather conditions. On many of the ranches on Piñon Mesa, livestock production is the primary use of the land. Ranchers are aware that livestock/big game grazing can directly compete with sage grouse for food (forbs and insects) and nesting cover during this time. Likewise it is recognized that fall grazing can remove residual cover needed the following spring for nest and brood cover. On Piñon Mesa, where sage grouse are found, vegetation is usually not mature enough for livestock grazing until mid-June, which is good for sage grouse nesting and early brood rearing. The distribution and potential over browsing by deer and elk on big game winter ranges may have had effects on important forage shrubs and associated plant communities which may have influenced sage grouse habitat quality. Habitat management programs, which involve increases of forb and grass cover while maintaining live sagebrush will benefit livestock, sage grouse, deer and elk, as well as other wildlife species.

Drought: Sage grouse production is indirectly affected by drought. While sage grouse are not limited by water in most cases, they are limited by the vegetative growth and insects lost during drought conditions. In the Piñon Mesa area, both nesting success of females and brood survival decline severely during years with low soil moisture. This effect is probably increased if land management practices remain unchanged during years with low soil moisture. However, drought does not appear to impact lek attendance of males.

Predators (coyote, ground squirrel, badger, eagle, hawk, falcon, bobcat, skunk, raccoon): Losses of sage grouse nests and young to predation are often high and can, in some locations, be the most significant factor in determining annual recruitment to the population. Studies have shown that ground squirrels and badgers can destroy up to 50% of the current year's nest and egg production. There is also a concern over coyote populations, which appear to be increasing, and the effects they may have on sage grouse. Eagles and hawks can be effective predators on sage grouse and some feel that eagle predation is increasing. The quality and quantity of grasses and forbs and other vegetation cover influence rates of predation. Predation is reduced when there is sufficient vegetation to conceal nests. Removal of piñon and juniper trees and tall shrubs can be effective in reducing predation risk of sage grouse.

Scientific Lek Harassment (i.e., Physical Disturbance Resulting From Scientific Studies): Research on sage grouse sometimes requires capture and marking (bands, radios) of individual grouse. Capture of grouse is usually most easily accomplished when birds are concentrated on or near leks for the purpose of display and mating. Methods used range from spotlighting to locate grouse that are then captured using long-handled nets to walk-in traps placed on or near leks. Repeated disturbance of sage grouse on leks has been demonstrated to make individuals more wary and flush more readily. Yearling males may change leks following marking but the available data suggest that this age/gender class commonly investigates a series of leks in their first year of life. Studies of radio-marked male and female sage grouse demonstrate strong attachment to the lek of capture despite repeated trapping activities.

Conflicting Uses During Critical Biological Activity Periods: The critical biological activity periods for sage grouse are during winter, breeding, nesting, and early brood rearing (December-mid July). Conflicting uses during this period are those that physically prevent sage grouse from using preferred habitats. These uses range from human disturbance (including pets), motorized vehicles, to herding of livestock and heavy grazing/browsing by deer and elk and by domestic livestock.

Recognition of Private Landowners Rights: Most landowners are willing to work collectively toward a goal, as long as the recommendations or actions concerning sage grouse do not impact their efforts to make a living. However, most private landowners are environmentally concerned and appreciate wildlife and try not to negatively affect habitat useful to wildlife. These landowners do good things for the land without having to be forced into action by an endangered species. Landowners are concerned about the protection of their rights to manage their lands as they view appropriate with no interference by the State or Federal government. This particular issue focuses on the potential for Federal intervention on private property management, use, and development should the Gunnison sage grouse become listed as a threatened or endangered species. The issue does not actually emerge until listing occurs. The Endangered Species Act, however, does provide for protection should the bird become listed. The ramifications can become complex and are discussed in Appendix D. Generally, landowners would likely see no impacts to land management practices which are currently in use.

Monitoring/Research: Monitoring of sage grouse populations through use of counts of males on leks has been used to estimate trends in population size. This effort requires vehicle access via roads and trails during the late March-mid May interval. Properly conducted, spring counts are not known to affect sage grouse. Research on sage grouse is periodically needed to learn more about specific requirements and responses to habitat treatments. The need for monitoring and periodic research will continue. Monitoring of vegetation in relation to grazing by domestic livestock and big game, especially in response to vegetation treatments, will continue on public lands. Annual lek counts are conducted by CDOW including counts of males and females at leks. Efforts are taken to gather census information with as little impact to leks as possible. Techniques

usually include the use of binoculars and spotting scopes. Usually, a minimum of three to four counts are conducted at each lek during the spring, and these are spread out over about five weeks.

Poisonous Plants: There was some concern that poisonous plants may be eaten by sage grouse resulting in death. There are no known problems with grouse being poisoned by eating of native plants.

Recreational Uses: Sage grouse have been hunted and their mating rituals observed since prior to European settlement based on native American artifacts and ceremonies. Sage grouse are not presently hunted on Piñon Mesa and there is no organized watchable wildlife viewing for the species within the boundary of the area. Other recreational use of the area such as big game hunting, blue grouse hunting, and predator hunting are not thought to be negative, although accidental kills of sage grouse may occur. Efforts should be made by CDOW to educate and inform hunters of the potential for misidentification of grouse species. These efforts should include development of pamphlets to distribute to hunters and signs at important locations providing information about sage grouse. Use of all terrain vehicles has the potential to negatively impact sage grouse, especially in winter. However, much of the area is seasonally closed due to snow cover, which limits access.

Hunting: Sage grouse hunting in the Piñon Mesa area has been closed since 1989 when it was recognized that the population appeared to be declining. Prior to that time seasons were generally open for sage grouse hunting. From 1970 to 1988 seasons were open in all years except 1973 and 1974. Generally, the CDOW recommends no hunting until populations reach a standard of 100 cocks counted in the spring for 3 consecutive years. Hunting of sage grouse in this area is not contemplated for the foreseeable future. No information on the number of grouse harvested annually is available for this population for any year.

VI. CONSERVATION ACTIONS AND IMPLEMENTATION

The foundation of the Piñon Mesa sage grouse Conservation Plan is its goals and objectives which together establish a framework for developing conservation actions. Conservation Actions are designed to be consistent with the plan's goals and also to meet one or more of the objectives. These actions also address issues that affect sage grouse, and/or their habitat. Due to the interrelationship of the habitat components, resource values, and issues, many actions may apply to more than one objective. However, to avoid duplication, these actions have been listed in Table 1 where the link is most direct. Any additional actions identified at a later date will be analyzed by the Partnership for the application and design to ensure the appropriateness and compliance with the goals and objectives set forth in this plan.

Plan implementation will be priority-based starting with those actions the Partnership believes to be most effective at accomplishing their goals. This group recognizes the need to be opportunistic in carrying out specific conservation actions as situations present themselves. For example, a particular conservation action might be implemented sooner than scheduled, if funding became available, or a group or individual came forward to help with completing a task.

Some actions have already begun, or are ongoing. Other actions would need to be done continually throughout the plan. These are normally a matter of policy or require small changes in the way resources are managed and land use activities take place. Sometimes a land use has to be proposed or initiated by a third party before the conservation action can be applied.

The adoption of these Conservation Actions will be the responsibility of the Partnership. Specific steps or tasks needed to carry out a conservation action will be developed as the implementation proceeds. Cost estimates, including those for monitoring and evaluation will be identified. Every effort to leverage money and resources will be made. Many actions, such as vegetation treatments are costly, and will be dependent upon seeking cooperative funding from many partners, and possibly outside sources, such as grants.

Because plan accomplishment will require a lengthy period to complete, it is important to track progress at meeting our goals. At least yearly, the Piñon Mesa Partnership will convene a meeting to examine

accomplishments and keep the plan on track. As actions are completed they will become part of the yearly progress report. A consolidated report will then be prepared and disseminated to Partnership members prior to the yearly or spring planning meeting.

An important part of the yearly progress report and meeting will be to discuss and document any exceptions or deviations to planned accomplishments. Inadequate funding may preclude the completion of an action in a given period. In this instance, an adjustment to the implementation sequence would be needed. What is important is to show continual progress at accomplishing the goals in the plan.

VII. MONITORING AND EVALUATION

Monitoring data will be gathered and used to evaluate progress in meeting the goal and objectives of this plan. Monitoring will be coordinated to insure that data collected will provide the needed information to assess the on-the-ground management actions and to measure progress in resolving resource problems and conflicts. This coordination will include appropriate consultation and cooperation with rangeland users, general public, landowners, academia, private organizations and local, State, and Federal agencies. Direct involvement by interested parties in the collection of data and in the subsequent evaluations based on these data will add to the credibility of monitoring results.

It is important that all monitoring information be easily accessed by those interested. Monitoring the response of the Gunnison sage grouse population to conservation actions will be measured by total number of active leks, and the total number of males counted. The number of active leks and total males will reflect winter survival as well as chick production in the previous year. Changes in habitat quality which result from the implementation of planned actions will be monitored using techniques applicable to the specific project or action. Three year averages of lek counts will be used to assess sage grouse population trend (1995-97, 1996-98, 1997-99, etc.).

Evaluations may be conducted anytime during the implementation of this plan. The goal of evaluation is to determine whether progress is occurring, and if progress is not occurring, to identify adjustments. It is the intent of the Partnership to frequently communicate with other Gunnison Sage Grouse Work Groups to seek and exchange information as progress is made on implementing the Conservation Actions.

Table 1. Piñon Mesa Gunnison sage grouse Conservation Actions (listed in no particular order & with examples of how to accomplish), and Implementation Schedule (when & who).

CONSERVATION ACTIONS		IMPLEMENTATION SCHEDULE	
Action	**Examples of How to Accomplish**	**When**	**Who**
A. Information & Education			
1. Provide to the public, landowners, and others n that describes sage grouse habitat needs and , and identifies sage grouse population levels. ncerns and opportunities to improve conditions for e in this area.	a. Maps, newspaper articles, radio & TV spots, displays. b. Public contacts (e.g., individuals, County Commissioners, local schools, Land Conservancy), meetings, & make available copies of Conservation Plan. c. Videos (sage grouse & habitat, treatments, etc.) in Coop with other sage ups. d. Brochures (e.g., Living with sage grouse in your backyard - control of ing brochure with difference between blue and sage grouse, including hs). e. Coordination/communications with; the public, other sage grouse groups, ley Audubon. f. Information sign at Glade Park store.	a. Ongoing opportunistically. b. Ongoing opportunistically. c. 1999-00 (completed by other d. Completed e. Ongoing opportunistically. f. 2000-2001	a. The Partnership. b. The Partnership. c. DOW Lead, BLM, NRCS, d. Glade Park Ag. and Open Space n e. The Partnership. f. DOW.
2. Work with interested parties, landowners and reate a better understanding of sage grouse needs, the value and importance of sage grouse and sage bitat, and provide a basis for sharing of ideas and greement on ways to improve sage grouse habitat and opulations.	a. Meetings with interested landowners, government/regulatory entities (e.g., nd livestock Associations). b. Maintain a current mailing list of interested citizens, and State, local, and encies. c. Distribute information about importance of sage grouse; availability of programs, Best Management Practices, effects of certain land uses on grouse. d. Coordinated Management of sage grouse with other wildlife species and gencies. e. Continue to work with other groups. f. Communicate with other sage grouse partnerships. g. Provide monitoring information and training to landowners. h. Present programs at local schools.	a. Ongoing opportunistically. b. Ongoing. c. Ongoing opportunistically . d. Ongoing opportunistically . e. Ongoing opportunistically . f. Ongoing, annually. g. Ongoing opportunistically. h. Ongoing opportunistically.	a. The Partnership, b. The Partnership. c. The Partnership. d. DOW, BLM, NRCS, FWS, s. e. The Partnership. f. The Partnership. g. The Partnership. h. The Partnership.
B. Monitoring			

CONSERVATION ACTIONS		IMPLEMENTATION SCHEDULE	
Action	**Examples of How to Accomplish**	**When**	**Who**
1. Identify and evaluate sage grouse habitat, ctors and activities that have the potential to impact e or their habitat. Identify and evaluate critical sage bitats.	a. Habitat mapping. Mapping may include but not be limited to overall oric habitat, winter area, severe winter range, brood area, nesting area, active active lek. b. Assess and track land-use changes, e.g., developments, roads, etc. c. On-site visits with landowners, holistic resource mgt. groups, livestock discuss and assess habitat conditions and monitoring needs. d. Joint-interagency/landowner evaluation, information sharing. e. Provide monitoring training to landowners. Provide monitoring forms to s for lek counts and brood counts. f. Big game impacts to range conditions.	a. Ongoing, annually. b. Update 3-5 years. c. As needed/requested/ tically. d. As needed/requested/ tically. e. As needed/requested/ tically. f. Ongoing, annually.	a. BLM, DOW, NRCS, landowners, b. BLM, DOW, NRCS, FWS, c. The Partnership. d. The Partnership. e. BLM, DOW, NRCS, Extension. f. DOW, BLM, private ranches.
2. Continue to gather or initiate the collection of urce data to better understand and document for sage grouse, including response to applied on measures.	a. Sage grouse population monitoring/census, e.g. lek counts and brood esearch including radiotelemetry studies i.e., movements, habitat use. b. Design and carry out monitoring for applied measures, e.g., treatments. c. Continue to identify changes in the sage grouse populations size (use 3 yr. lek counts).	a. Annually, March-May/July-August. b. Annually, as needed. c. Annually.	a. DOW, BLM, landowners b. BLM, NRCS, Extension, s. c. DOW.
C. Avoiding or mitigating permanent loss of habitat			
1. Develop and encourage incentives for s to avoid or mitigate loss of sage grouse habitat.	a. Land exchanges. b. Conservation Easements Mesa County Land Conservancy, CDOW, CCA, n. Elk Foundation, etc. c. Transferrable development rights. d. Payment for non use of sage grouse habitat, if funds are available for long- ements. e. Application of specific land use practices that benefit grouse, e.g., water ent, grazing plans. f. Develop recommendations for managing sagebrush community as a whole, g all uses.	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically . d. Ongoing opportunistically . e. Ongoing opportunistically . f. Ongoing opportunistically .	a. BLM/Private landowners. b. Private landowners. c. The Partnership, County, s, developers. d. DOW, NRCS (WHIP, EQIP), e. DOW, BLM, NRCS, Pvt., f. DOW, BLM, NRCS, Pvt., FWS,
2. Enhance existing and restore former sage grouse offset loss of habitat elsewhere.	a. Vegetation treatments, e.g., brush beat, burn, reclaim. seed, Piñon-Juniper ontrolled fire (use extreme care). b. Mitigating effects of human population growth and development.	a. Ongoing opportunistically . b. Ongoing opportunistically .	a. BLM, DOW, NRCS, Extension, s. b. The Partnership, County

CONSERVATION ACTIONS		IMPLEMENTATION SCHEDULE	
Action	**Examples of How to Accomplish**	**When**	**Who**
3. Prevent loss and fragmentation of habitat from on of roads and utilities.	a. Relocate or modify new utility lines, roads, developments, etc. in key bitat.	a. Ongoing opportunistically.	a. BLM, DOW, FWS, County, s.
D. Restoring or improving quality of grouse habitat and populations			
1. Enhance existing riparian areas, or create or mall wet areas to benefit sage grouse nesting and ing habitat.	a. Design and implement livestock grazing management practices to benefit eas. Use fencing for rest rotation management in nesting and brood rearing b. Modify or adapt springs to create small wet areas. c. Enhance and protect existing natural wet areas.	a. Ongoing opportunistically . b. Ongoing opportunistically . c. Ongoing opportunistically.	a. BLM on Public lands, NRCS owners on private lands. b. BLM on Public lands, NRCS owners on private lands. c. BLM, FWS, landowners.
2. Eliminate or modify situations that cause	a. Modify power lines and wood fence posts (to remove raptor perches) in ge grouse areas. b. Cut pinyon-juniper trees near leks and elsewhere within potential sage bitat to remove raptor perches, and to maintain the sagebrush habitat. c. Sale of Christmas trees in key sage grouse areas.	a. Ongoing opportunistically . b. 1999 and ongoing. c. Opportunistically.	a. DOW, BLM, Power Company, s, FWS. b. BLM (contracts, Delta Honor downers, NRCS,& DOW, & FWS s to landowners). c. BLM (if approved), landowners.
3. Implement local guidelines and use Best ent Practices to guide land uses to increase sage bulations and improve sage grouse habitat quantity y.	a. Implement livestock grazing practices that benefit sage grouse habitat quality sical disturbance to grouse during critical times, i.e., breeding and nesting. b. Restore and rehabilitate riparian areas. c. Proper land treatment design and construction that reduce impacts to sage g., how and where to plan projects). d. Land development options. e. Construction standards (placement, timing, rehab. techniques).	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically. d. Ongoing opportunistically. e. Ongoing opportunistically.	a. BLM-permittee's, t.-landowners. b. BLM, FWS, landowners. c. The Partnership. d. The Partnership. e. The Partnership.
4. Improve sage grouse habitat quality, and egetation cover, especially forbs and grasses in sage grouse habitats and in historic, unoccupied ere vegetation treatments would improve conditions apable of supporting reoccupation by sage grouse.	a. Develop and use sound grazing management practices in coordination with agement plans, BLM allotments. b. Plant and/or re-seed with a high proportion of forbs. c. Design vegetation treatments in sage grouse areas to be compatible with e needs. d. Improve ground cover in sage grouse areas. e. Manage big game population and habitat to minimize or avoid conflicts on bitats, and to encourage moving them off grouse habitat, i.e., to the extent	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically. d. Ongoing opportunistically. e. Ongoing opportunistically.	a. BLM, Private. b. BLM, NRCS, DOW, FWS, c. BLM, RMEF, NRCS, DOW, ate. d. BLM, RMEF, NRCS, DOW, ate. e. BLM, DOW, Private.

CONSERVATION ACTIONS		IMPLEMENTATION SCHEDULE	
Action	**Examples of How to Accomplish**	**When**	**Who**
	evelop the highest quality big game habitat outside the sage grouse prime f. Integrate weed management with grouse needs. g. Vegetation treatments to improve vegetative age class diversity, improve nd forb component (may or may not need to seed), and reclaim any disturbed h. Develop habitat enhancement plans for individual ranches. I. CDOW and BLM will develop a strategic plan for management of sage bitat on BLM lands. j. Through detailed maps, identify essential wildlife habitat including overall oric habitat, winter area, severe winter range, brood area, nesting area, active active lek. Mapping should delineate areas of primary concern for management, , and enhancement of leks, nesting areas, wintering area, brood area, etc.	f. Ongoing opportunistically. g. Ongoing opportunistically. h. Ongoing opportunistically. I. Ongoing and revised as necessary. j. Ongoing annually.	f. BLM, County Weed Board, g. BLM, Private, CDOW. h. Individual ranches, CDOW, I. BLM and CDOW j. CDOW, BLM, individual
5. Increase opportunities for improving over-vival, escape cover near leks, nesting cover, and the range or use areas of sage grouse, e.g. use of new nd areas.	a. Improve quality of sagebrush dominated habitats by using grazing nt and vegetation treatment, e.g., mechanical treatment, fertilization. b. Avoid treatment projects that remove large stands of sagebrush in critical c. Attempt to expand existing sage grouse use areas/range by using calls to es during the breeding season to use new lek sites close to or adjacent to existing	a. Ongoing opportunistically. b. Ongoing opportunistically. c. 2001 (start).	a. BLM, DOW, NRCS, FWS, b. BLM, FWS, Private. c. DOW.
E. Reducing Physical Disturbance to Sage Grouse			
1. Mitigate or reduce conflicts with sage grouse ical biological periods and on critical habitats.	a. Noise or physical disturbance ordinances or restrictions during critical ar leks, e.g. manage on-road travel and OHV use in key grouse areas to avoid e during critical times. b. Delay or modify construction start up dates or hours during peak lek dates in April and May and after 9:00 am. c. Control or limit pets. d. Coordinate grazing management to avoid conflicts on leks during April, early June.	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically. d. Ongoing opportunistically.	a. BLM, County. b. BLM, FWS, County, DOW. c. DOW, FWS, County. d. BLM, FWS, Private.
F. Improving landowner and community support and participation			
1. Incorporate economic, social and cultural values rvation practices.	a. Seek understanding, information sharing and maintaining communication. b. Adopt principle of voluntary participation. c. Involve landowners and, when appropriate, local communities in all	a. Ongoing opportunistically. b. Ongoing opportunistically. c. 1999, ongoing opportunistically.	a. The Partnership. b. The Partnership. c. The Partnership.

CONSERVATION ACTIONS		IMPLEMENTATION SCHEDULE	
Action	**Examples of How to Accomplish**	**When**	**Who**
	sage grouse conservation. d. Protect and respect landowner property rights	d. Ongoing	d. CDOW, BLM, NRCS, FWS
2. Maintain local control.	a. Maintain Sage Grouse Partnership (must include landowners, local to serve as advisory body. b. Continually seek input and involvement. c. Annual (or as needed) hold a Partnership meeting to discuss progress and ds, and plan a yearly schedule of events and conservation action implementation.	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically.	a. The Partnership. b. The Partnership. c. The Partnership.
3. Develop, improve, and encourage credibility ss.	a. Seek outside scientific review of projects. b. Involve college and/or universities. c. Adapt and change as we go. d. Annually the Partnership will prepare and disseminate to the members and rogress report.	a. Ongoing opportunistically. b. Ongoing opportunistically. c. Ongoing opportunistically. d. Annually.	a. The Partnership. b. The Partnership. c. The Partnership. d. The Partnership.

APPENDIX A GLOSSARY

Canopy Cover - The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included.

Cecal dropping- A dark, tar-like excrement that is often observed on leks where sage grouse concentrate in the spring.

Extirpated - A term used for a species when it is considered to no longer be found in a specific area it once occupied. Extinct would be used when the species completely eliminated from all habitats and can no longer be found anywhere.

Fragmentation - Fragmentation is a term used to describe habitats or populations that have been broken up, separated, or divided due to many factors either natural or often man-made. Often this results in several or many small wildlife populations or habitats that may or may not be able to support a species over a long period of time.
Lek - An arena where male sage grouse display for the purpose of gaining breeding territories and attracting females. These arenas are usually open areas with short vegetation within sagebrush habitats, usually on broad ridges, benches, or valley floors where visibility and hearing acuity are excellent.

Lek Area - The geographic area that includes all closely allied lek sites within 1 mile. This geographic area is usually stable overtime.

Lek Count -The high count of males from all lek sites on the same day; which are taken at 7-10 day intervals between late March and mid May.

Lek Site - A particular site where sage grouse gather for display and mating in spring (Mar-May). The actual site used can vary daily, seasonally, and yearly.

Sagebrush - As referred to in this plan, includes the following species: **Basin Big** - *Artemisia tridentata tridentata;* **Mountain Big** - *Artemisia tridentata vaseyana;* **Black** - *Artemisia nova*; and **Silver** - *Artemisia cana.*

Steppe - A semi-arid grass-covered plain, usually lightly wooded.

Strutting Ground - See Lek.

APPENDIX B LISTING FACTORS

Listing factors considered by the U.S. Fish and Wildlife Service in evaluating possible action under the Endangered Species Act.

Factor A. Present or threatened destruction, modification, or curtailment of its habitat or range.

The range of the Gunnison sage grouse in the Piñon Mesa Area has been greatly reduced in size and quality through habitat loss caused by plowing, spraying, road construction, and power lines; habitat fragmentation caused by the same factors, and habitat degradation caused by the same factors as well as inappropriate livestock management. Total range reduction is estimated at greater than 50%.

This Conservation Plan will reduce destruction, modification, or curtailment of the Gunnison sage grouse's range through implementing the following management actions: Eliminating major land disturbances from housing development and industrial uses (other than farming and ranching); by reducing unnecessary roads; reducing or eliminating disturbed land by livestock operations; using mechanical means for habitat improvement; reducing unnecessary utility lines/ and improving vegetative habitat and soil conditions by reseeding with forbs, by using proper grazing and hay mowing management, by managing noxious weeds, by appropriate big game management, and by appropriate herbicide use.

Factor B. Overutilization for commercial, recreational, scientific, or educational purposes.

No overuse of Gunnison sage grouse in the Piñon Mesa Area is apparent as hunting is not permitted, there is no commercial or recreational use, and scientific study (banding, radio marking) only affected 10-15 birds in 1995-96. Educational field trips may occur but are not likely to cause disturbance to the Gunnison sage grouse if proper viewing protocols are followed.

Factor C. Disease or predation.

No disease/parasite problems have been identified in Gunnison sage grouse in the Piñon Mesa Area. Predation is a natural event and about 50% of the total population disappears (dies) each year. Major identified predators of adults include golden eagles, goshawks, bobcats, and coyotes. Most loss of potential productivity is through nest failure caused by ground predators such as ground squirrels, badgers, etc.

Factor D. Authorities and existing regulatory mechanisms.

Members of the Piñon Mesa Gunnison Sage Grouse Partnership are committed to improving conditions for sage grouse in the area. While landowner adoption of the proposed conservation actions is voluntary, the Conservation Plan was developed with the spirit of cooperation and there is broad support for the goals and objectives contained in the Conservation Plan. The Partnership believes existing regulatory mechanisms are adequate to achieve these goals and objectives.

The Colorado Division of Wildlife, a branch of the Colorado Department of Natural Resources, has responsibility for the management and conservation of wildlife resources as defined and directed by state laws. The Division also has enforcement authority for poaching and harassment.

The Board of County Commissioners of Mesa County, Colorado has authority to regulate land use, land planning, and protection of the environment in the County. Mesa County has regulations to exercise such authorities including the review, approval or denial of proposed activities and uses of land.

The USDA Forest Service (USFS) has direction and authority for the maintenance of biological diversity on National Forests and for the protection and management of wildlife species and habitats as defined and directed by various Federal Laws and Regulations.

The USDA Natural Resources Conservation Service (NRCS) also has authority for conservation of the Gunnison sage grouse through various Federal Laws.

The USDI Bureau of Land Management (BLM) has authority for conservation of the Gunnison sage grouse and the management of natural resources and land uses on Public Lands through a number of Federal Laws and Regulations.

The USDI Fish and Wildlife Service (USFWS) has authority for conservation of the Gunnison sage grouse through the Endangered Species Act of 1973 and other Federal Laws.

Two other authorities for agencies working on Gunnison sage grouse conservation include a Memorandum of Understanding and a Memorandum of Agreement. In 1994, several federal agencies, including those listed here, signed a Memorandum of Understanding to establish a general framework for better cooperation and participation among these agencies in the management and conservation of species at risk, which are tending towards federal listing as threatened or endangered. In 1995, the state of Colorado and the U.S. Department of Interior entered into a Memorandum of Agreement which committed agencies in the Department of Interior and the state to collaborate and cooperate in management and conservation of declining populations of fish and wildlife and their habitat. This agreement has 2 important tasks: "The state and the Department agree to develop and implement programs to determine and monitor the status of species at risk;" and "The state and the Department will encourage partners and stake holders to take a leadership role in working with the state and the Department to develop and implement conservation actions through Conservation Agreements and Recovery Agreements. " A list of species for which the Department and the state would initially focus conservation actions on was written. This list specifically mentioned declining populations of sage grouse.

Factor E. Other natural or manmade factors affecting its continued existence.

Natural factors affecting the continued existence of Gunnison sage grouse in the Piñon Mesa Area include natural fragmentation and severe weather conditions during the nesting and early brood periods. Fire suppression is a man-made threat leading to changes in habitat through invasion of piñon-juniper and allowing sagebrush habitat types to become dominant, old-aged stands. Other man-made factors that effect sage grouse include continuous noise that impairs the acoustical components of males on leks; disturbance from construction or other projects; harassment from pets; and disturbance, death, or habitat degradation from use of off-highway-vehicles (OHV's)

To address these threats, fire or other habitat management may be prescribed to remove invasive trees and restore native plants and vitality to the sagebrush habitats used by sage grouse. Additionally, noise ordinances or restrictions during critical periods near leks may be enforced, construction start up dates may be delayed or modified, pets may be encouraged to be controlled or limited, and OHV use areas and other travel management in key sage grouse areas may be enforced.

APPENDIX C LIST OF WORKING PARTICIPANTS

Aubert, Dahl	Rancher/Landowner
Braun, Clait	CDOW
Chesnick, Belle	Rancher
Creeden, Paul	CDOW
Crompton, Brad	Utah Division of Wildlife
Dollerschell, Jim	BLM
Gleason, Roy and Barbara	Rancher/Landowner
Gore, Warren	Rancher/Landowner
Graham, Van	CDOW
Ireland, Terry	USFWS
King, Doug	Rancher/Landowner
Lambeth, Ron	BLM
Meinhart, Don and Florine	Rancher/Landowner
Power, Rod	Rancher/Landowner
Tipping, Ron	Rancher/Landowner
Toolen, John	CDOW
Van Loan, Jay and Dori	Rancher/Landowner
Wallace, Guy	Utah Division of Wildlife
Yamashita, Steve	CDOW

APPENDIX D SIGNATURE PAGE

The following parties are interested in the maintenance and enhancement of Gunnison sage grouse on Piñon Mesa. These signatures demonstrate their willingness to preserve Gunnison sage grouse and its habitat on Piñon Mesa to the best of their abilities.

Steve Yamashita, Area 7 Wildlife Manager — Date
Colorado Division of Wildlife
West Region

Catherine Robertson, Area Manager — Date
Bureau of Land Management
Grand Junction Resource Area

Allan Pfister, Assistant Field Supervisor — Date
Department of Interior
United States Fish and Wildlife Service

James Currier, District Conservationist — Date
National Resource Conservation Service
Grand Junction Field Office

Utah Division of Wildlife Resources — Date
Price, Utah

Piñon Mesa Gunnison sage grouse partnership member — Date

Piñon Mesa Gunnison sage grouse partnership member — Date

Piñon Mesa Gunnison sage grouse partnership member — Date

Piñon Mesa Gunnison sage grouse partnership member — Date

Piñon Mesa Gunnison sage grouse partnership member Date

Piñon Mesa Gunnison sage grouse partnership member Date

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Piñon Mesa Gunnison sage grouse partnership member Date

APPENDIX E MALE SAGE GROUSE COUNTS

High Counts of male Gunnison sage grouse, Piñon Mesa, Mesa County, Colorado

Lek Site	1995	1996	1997	1998	1999	2000
Fish Park	2	+	+	+	+	--
Luster Basin	3	3	7	7	6	6
Mountain Island					+	--
Nelson Creek	6	5	4	4	3	5
Payne Mesa						
Lower (north)	1	5	+	+	2	5
Pond	0	8	8	4	8	11
Upper (south)	4	3	4	11	10	6
Thompson Reservoir	0	NC	NC	NC	NC	NC
Totals	16	24	23	26	29	33

+ Notes presence of grouse at leks as observed by sign (droppings, tracks, feathers), but no observation of birds.
-- Notes no presence of grouse noted during count.

Melodie Lloyd/GJFO/CO/BLM/DOI
10/28/2004 12:30 PM

To: gblakeslee@tnc.org, jcomstock@moffatcounty.net, mtncj7@cs.com, jonrac@starband.net, Kathy.hall10@bresnan.net, wrpaints@amigo.net, Kent Walter/MEFO/CO/BLM/DOI@BLM, John Husband/CRFO/CO/BLM/DOI@BLM, Jamie Connell/GSFO/CO/BLM/DOI@BLM, Catherine
cc:
bcc:
Subject: Directions & Time Fw: NWRAC Dinner, Nov. 9

Please RSVP to Pat Kennedy at pkcsk@aol.com if you haven't already done so! Note that this is a joint effort between Hosts John Martin & Pat Kennedy. Directions to the Martin home are below & the target time is 6:30-ish.

Details will be finalized tomorrow for the Nov. 9 field trip & you'll be receiving an e-mail on that early next week.

Mel Lloyd
BLM Western Slope Public Affairs
2815 H Road
Grand Junction, CO 81506
970.244.3097
----- Forwarded by Melodie Lloyd/GJFO/CO/BLM/DOI on 10/28/2004 12:23 PM -----

"John C. Martin" <jmartin@gvii.net>
10/25/2004 08:55 PM

To: Melodie_Lloyd@co.blm.gov
cc:
Subject: Re: NWRAC Dinner, Nov. 9 RESPONSE NEEDED BY: 10/29/04

Correction please, Pat Kennedy and John Martin are hosting, and to increase interest, there will also be Pat's famous beans, other side dishes, and adult beverages. Should there be a particular adult beverage you prefer, bring it.

Address: 2524 I Road, Grand Junction
Directions: 1st street becomes 26 Road once out of the city limits. Go North on 1st street, three miles North of Patterson (F Road) to "I", turn left (west) on I for 3/4 mile to 2524. If you get to the stop sign, you went 1/4 mile too far.
From the BLM office, go west on H, (the office is on H and Horizon), approximately 2 miles and H will dead end on 26 Road. Turn right (north) on 26 for one mile, left on I and 3/4 mile to 2524. If you get lost, call 242-3716.

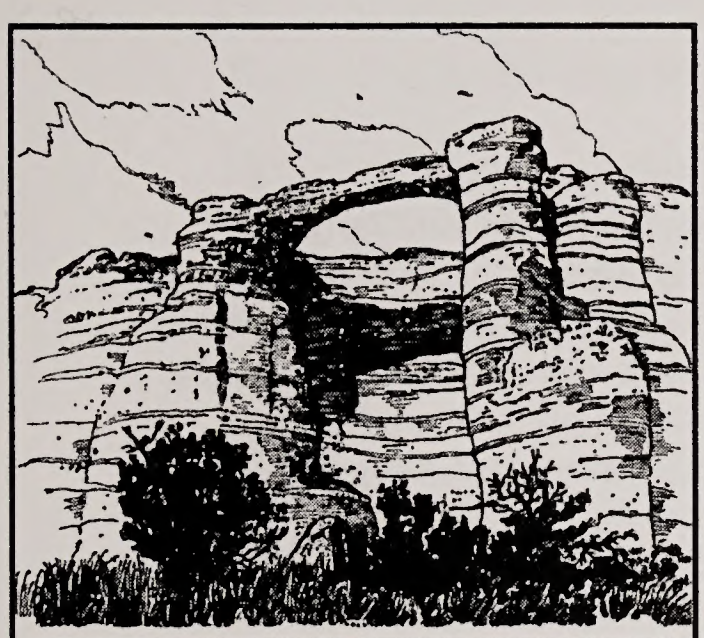
Melodie_Lloyd@co.blm.gov wrote:

>
>
>John Martin will be hosting a dinner Tue., Nov. 9 at his home for RAC
>members, their spouses & BLM staff involved in the meeting/field trip.
>
>Chef Kennedy needs a count of heads for preparing an adequate number of
>babyback ribs for the dinner. BLM folks, please reply and/or forward to
>the appropriate staff needing to see this message.

>
>By this Fri., please e-mail Pat directly at pkcsk@aol.com & let him know
>that you/your spouse will be attending.
>
>Thanks!
>
>Mel Lloyd
>BLM Western Slope Public Affairs
>2815 H Road
>Grand Junction, CO 81506
>970.244.3097
>
>
>
>

APPENDIX 5

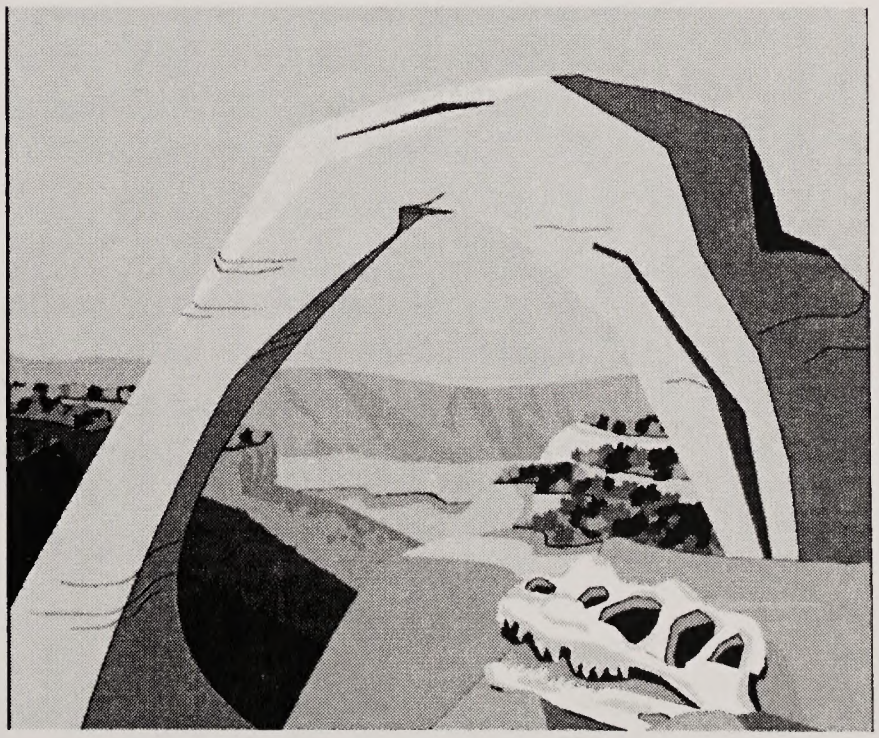
Public Involvement



COLORADO CANYONS

NATIONAL · CONSERVATION · AREA

BUREAU OF LAND MANAGEMENT



PUBLIC INVOLVEMENT

5.1 Introduction

This Resource Management Plan (RMP) for the Colorado Canyons National Conservation Area (CCNCA) represents extensive collaboration with and input from interested individuals, organizations, local and state governments, and other federal agencies. The National Environmental Policy Act (NEPA) ensures the public's involvement in the decision-making process, as well as allowing for full environmental disclosure.

Public involvement for the CCNCA RMP is occurring in two phases:

- Public scoping prior to NEPA analysis to obtain public input on issues and proposed alternatives, and
- Public review and comment on the Draft RMP/EIS, which includes analyzing possible environmental impacts and identifying the preferred alternative.

Throughout the scoping and planning process, which officially began in December 2001, the CCNCA Citizen Advisory Council and Working Groups composed of the various user groups met with BLM extensively to discuss resource and management issues, took numerous field trips facilitating better insight into the issues, and then worked together in developing a spectrum of recommendations for resolving the issues.

5.2 Public Scoping Activities

The objectives of public scoping prior to NEPA analysis are to:

- Invite individuals, organizations, local and state governments, and other federal agencies to participate;
- Identify a preliminary list of environmental and socioeconomic issues to address in the NEPA document; and
- Identify and eliminate issues determined to be insignificant.

5.2.1 Notice of Intent

The scoping process for the CCNCA began on December 12, 2001, with publication of the Notice of Intent in the Federal Register. With this, the public was officially notified of the BLM's intent to develop a plan for those BLM-managed lands lying within the CCNCA. This Notice of Intent also solicited public comments.

5.2.4 Public Scoping Meetings

Along with numerous open houses held in communities in close proximity to the planning area, an intensive schedule of meetings, field trips, presentations, event exhibits, and training was maintained throughout the planning process (see Table 5-1). The open houses provided the public with an opportunity to receive information, ask questions, and offer input. All public outreach activities were scheduled with the intent to encourage public participation through extended and/or convenient dates and times. Collaboration, among the diverse individuals and organizations participating in the planning process with the BLM, was strengthened by both one-on-one interactions as well as in group settings. Attendees have had the opportunity to view exhibits and presentations on the CCNCA, covering both general and resource specific items, at various events. Chosen venues, including the BLM conference room and civic and community centers, ensure accessibility for the disabled and also encourage a broader participation through the diverse venue settings. Cooperative agreements have been executed between BLM and several other agencies, including the Department of Natural Resource, Colorado Division of Wildlife, and Bureau of Reclamation. BLM also benefits from working closely with the city of Fruita, Mesa County-Colorado, the National Park Service/Colorado National Monument (COLM), and the BLM Moab Field Office (Utah). Both the COLM and BLM Moab resources share common boundaries with the CCNCA.

Table 5-1
Schedule of Colorado Canyons NCA Meetings and Field Trips

JANUARY 2002	
January 14-18	Training: "Successful Land Use Planning" Washington, State, and Field Office personnel
January 22	CCNCA Planning Open House, Grand Junction
January 24	Western Colorado Tourism Council Meeting
January 29	Quiet Trails Coalition Meeting
FEBRUARY 2002	
February 5-7	Cooperative Involvement in Colorado National Monument Scoping Meetings -Glade Park, Fruita, Grand Junction
February 11	CCNCA Planning Open House, Fruita

Table 5-1
Schedule of Colorado Canyons NCA Meetings and Field Trips

February 14	Initial Advisory Council Meeting
February 19	Presentation to Grand County, Utah, Council
February 22	Presentation to Mesa County Commissioners
February 27	Gateway Community Workshop
February 28	Working Group Membership Open House
MARCH 2002	
March 12-14	Training: Community-Based Partnership for Stakeholders
March 11	Initial Wilderness Working Group Meeting
March 12	Initial River Working Group Meeting
March 13	Initial Mack Ridge Working Group Meeting
March 14	Advisory Council Meeting
March 18	Initial Rabbit Valley Working Group Meeting
March 19	Wilderness Working Group
March 21	Mack Ridge Working Group
March 26	River Corridor Working Group
APRIL 2002	
April 1	Colorado National Monument Cooperating Association Meeting
April 1	Rabbit Valley Working Group
April 2	Wilderness Workshop-Working Group and Public
April 3	Meeting with Backcountry Horseman's Association
April 4	Mack Ridge Working Group
April 7	Rabbit Valley Working Group-Field Trip; Rabbit Valley Recreation Area
April 8	Rabbit Valley Working Group
April 9	Interagency Collaboration Session with Representatives of Ute Tribes
April 9	River Corridor Working Group
April 11	Advisory Council Meeting-McInnis Staff Briefing and Telecon
April 12	River Corridor Working Group-Field Trip; Colorado River
April 13	Wilderness Working Group-Field Trip: Wilderness Front Country
April 16	Meeting with Mesa County Planning Department
April 16	Wilderness Working Group
April 18	Mack Ridge Working Group
April 20	Wilderness Working Field Trip-Wilderness Backcountry
April 22	Rabbit Valley Working Group
April 23	River Corridor Working Group
April 23	Meeting with Mesa County Planning Department
April 24	City of Fruita Planning Meeting/Tour
April 30	BLM State Office Planning Briefing
April 30	Mack Ridge Working Group Field Trip-East Mack Ridge

Table 5-1
Schedule of Colorado Canyons NCA Meetings and Field Trips

MAY 2002	
May 2	Tour of CCNCA with Congressman McInnis's staff
May 6	Planning Meeting with Moab (UT) Field Office
May 6	Presentation to Mack Area Community Council
May 9	Advisory Council Meeting -Great Sand Dunes National Monument Mgr. -Colorado Department of Natural Resources
May 9	Meeting with Sierra Club
May 9	Grand Junction Travel Expo Exhibit
May 13	Rabbit Valley Working Group
May 14	Briefing to Grand Junction Departments of Planning, Development, and Visitor & Convention Bureau
May 16	Mack Ridge Working Group
May 21	Wilderness Working Group
May 21	Meeting with Colorado Division of Wildlife
May 22	Initial Consultation Meeting with U.S. Fish and Wildlife Service
May 23	Presentation on CCNCA Plan to Community Economic Development Strategy Session
May 28	River Corridor Working Group
May 30	Mack Ridge Working Group Field Trip-West Mack Ridge
May 30	Training: Sonoran Institute Economic Profile System
JUNE 2002	
June 4	Wilderness Working Group
June 13	Advisory Council Meeting -Moab Field Office -U.S. Geological Survey (USGS)
June 18-19	Representatives of the Uintah and Ouray Reservation Visit CCNCA
June 18	Wilderness Working Group
June 25-27	Support to Colorado National Monument Public Meetings
June 27	Mack Ridge Working Group
JULY 2002	
July 2	Wilderness Working Group
July 8	Rabbit Valley Working Group
July 9	Meeting with Colorado Department of Natural Resources to draft Cooperating Agency Agreement and Memorandum of Understanding
July 10	Meeting with Mesa County Commissioners
July 11	Advisory Council Meeting -Socioeconomic Profile of Mesa County

Table 5-1
Schedule of Colorado Canyons NCA Meetings and Field Trips

July 15	Mack Ridge Working Group Field Trip
July 18-19	Benefits-Based Management Training (BBM) CCNCA staff and Advisory Council
July 18	BBM Workshop-Advisory Council and Working Group Members
July 26	Advisory Council Field Trip-Wilderness Front Country and Mack Ridge
July 30	Glenwood Springs Field Office-Land Exchange Meeting
July 30	Wilderness Working Group
July 31	Initial Consultation with Ute Indians of the Uintah and Ouray Reservation
AUGUST 2002	
August 2	Execution of Memorandum of Understanding with Colorado Department of Natural Resources
August 3	Advisory Council Field Trip-River Corridor Working Group
August 5	Mack Ridge Working Group
August 6	Rabbit Valley Working Group
August 8	Advisory Council Meeting
August 17	Advisory Council Field Trip-Glade Park
August 20	Congressman McInnis's Staff Tour of CCNCA
August 27	Wilderness Working Group Field Trip
SEPTEMBER 2002	
September 3	Wilderness Working Group Meeting
September 9	Grant Writing Training-CCNCA Staff, Advisory Council, and Partners
September 9	Rabbit Valley Working Group Meeting
September 12	Advisory Council Meeting
September 16	Mack Ridge Working Group Meeting
September 17	Wilderness Working Group Meeting
September 19	Colorado State Planners-CCNCA Planning Seminar
September 23	Great Old Broads for the Wilderness-Briefing on CCNCA
September 26	Consultation with Southern Ute Tribe
September 26	Great Old Broads for the Wilderness-Briefing on CCNCA
September 28	Advisory Council Field Trip-Rabbit Valley
OCTOBER 2002	
October 7	Mack Ridge Working Group
October 10	Advisory Council Meeting
October 15	Rabbit Valley Working Group
October 22-23	BLM Planning Workshop
October 28	Mack Ridge Working Group Visioning
October 29	Wilderness Working Group Visioning
NOVEMBER 2002	
November 6	Grand Mesa Jeep Club Coordination Meeting
November 12	Mack Ridge Working Group Visioning Exercise

Table 5-1
Schedule of Colorado Canyons NCA Meetings and Field Trips

November 14	Advisory Council Meeting
November 18	Rabbit Valley Visioning
DECEMBER 2002	
December 3	Briefing to Mesa County Inter-Agency Government Meeting
JANUARY 2003	
January 9	Advisory Council Meeting
January 14	Coordination Meeting with Colorado National Monument Staff
January 23	River Corridor Working Group Meeting
FEBRUARY 2003	
February 6	Advisory Council Meeting
February 21	Wilderness Front Country (Urban Interface) Meeting
February 28	Wilderness Front Country (Urban Interface) Meeting
MARCH 2003	
March 6	Advisory Council Meeting
March 7	Wilderness Front Country (Urban Interface) Meeting
March 10	BLM Moab Planning Team
March 17	Meeting with COLM Management
March 27	Planning Update to Colorado Department of Natural Resources
APRIL 2003	
April 3	Advisory Council Meeting
MAY 2003	
May 1	Public Open House on RMP/EIS
May 17	Briefing to Colorado Plateau River Guides
May 29	Meeting with BLM Moab Planning Team
JUNE 2003	
June 5	Briefing to BLM Director Clarke
June 5	Advisory Council Meeting
June 9-12	Interdisciplinary Team Impact Analysis
June 26	Briefing to Secretary of the Interior Norton
June 30	Float trip with Local Media
AUGUST 2003	
August 7	Advisory Council Meeting
SEPTEMBER 2003	
September 4	Advisory Council Meeting
OCTOBER 2003	
October 2	Advisory Council Meeting
2004	
January 28	Public Open House
June 30	Public Open House

5.3 Citizen Advisory Council and Working Groups

In recognition of the local community's historic involvement in public land management, the Act included specific language directing the BLM to

incorporate a Citizen's Advisory Council as an integral element in the RMP/EIS planning process and plan implementation. The CCNCA Advisory Council is composed of ten members from the local community, appointed by the Secretary of the Interior (see Table 5-2). The Advisory Council meets monthly, and all meetings are open to the public.

Table 5-2
Citizen Advisory Council Members

Name	Location	Interest
Ken Currey	Fruita	Northwest Resource Advisory Council
Art Donoho	Fruita	Public-at-Large
John Foster	Grand Junction	Public-at-Large
Doralyn Genova	Grand Junction	Mesa County Official
Warren Gore, Chairman	Glade Park	Grazing Permittee
Doug Hall	Fruita	Public-at-Large
Joe Keys	Clifton	Public-at-Large
Dan Rosenthal	Grand Junction	Public-at-Large
Bob Silbernagel, Vice Chair	Palisade	Public-at-Large
Russ Walker	Grand Junction	Public-at-Large

To facilitate the work of the Advisory Council, the CCNCA was divided into four planning zones with Working Groups established for each of the zones (see Figure 1-1 and Table 5-3). These Working Groups do not have a decision-making, voting, or official advisory role, nor are the participants pressured to reach consensus, but the knowledge and input the group members provide proved invaluable to the successful development of this RMP and will continue to do so during the implementation as well. After an intense meeting schedule throughout the planning process, Working Groups meet as necessary to assist the BLM.

The planning zones and representative activities in the CCNCA are:

(1) The Wilderness Zone – hiking, backpacking, horseback riding, grazing, and hunting.

(2) The Rabbit Valley Zone – off-highway vehicle (OHV) riding, hiking, Native American rock art viewing, camping, wildlife viewing, mountain bike riding, horseback riding, and grazing.

(3) The River Corridor Zone – boating, hiking, and camping.

(4) The Mack Ridge Zone – mountain bike riding and horseback riding.

Table 5-3
Working Group Members

Mack Ridge Zone

Table 5-3
Working Group Members

Name	Location
John Foster	Grand Junction
Dan Rosenthal	Grand Junction
Bob Anthony	Grand Junction
Clare Bastable	Grand Junction
Leonard Bagwell	Loma
Nadja Brozina	Grand Junction
Tommy Collins	Grand Junction
Kevin Foote, Group Leader	Grand Junction
Pat Kennedy	Grand Junction
Tom Lucks	Mack
Neal McKinstry	Fruita
Clark Rieves	Grand Junction
Connie Rosenthal	Grand Junction
Lovell Sasser	Mack
Rabbit Valley Zone	
Name	Location
Ken Currey	Fruita
Art Donoho	Fruita
Bob Silbernagel	Grand Junction
Sue Benjamin	Grand Junction
Tom Boni	Eagle
Nadja Brozina	Grand Junction
Arleta Carr	Grand Junction
Kathy Click	Grand Junction
Mike Click	Grand Junction
David Dunsmoor	Grand Junction
David Farny	Mack
N. J. Fulmer	Grand Junction
Chris Jouflas	Grand Junction
Pete Jouflas	Grand Junction
Chris Long	Collbran
Dave Long	Collbran
Rabbit Valley Zone continued	
Name	Location
Celeste Marsh	Grand Junction
Neal McKinstry	Fruita
Warren Petersen	Palisade
John Potter, Group Leader	Loma
Shari Raso	Palisade
Eric Rechel	Grand Junction
Steve Renstrom	Grand Junction
Roland Reynolds	
Lovell Sasser	Mack
Gary Shaw	Grand Junction
Charlie Sweet	Grand Junction
Paul Toft	Grand Junction
River Corridor Zone	
Name	Location

Table 5-3
Working Group Members

Doug Hall	Fruita
Joe Keys	Clifton
Russ Walker, Group Leader	Grand Junction
Travis Baier	Grand Junction
Lowell Clark	
Jonathon Cooley	
Dick Cozza	Grand Junction
Shaun Deeney	Grand Junction
Matt Dible	Grand Junction
Mike Dirsmith	Grand Junction
Walter Fees	Grand Junction
Ken Fulmer	Grand Junction
Ted Howell	Grand Junction
Denny Huffman	Grand Junction
Gary Hunt	
Tom Kleinschnitz	Grand Junction
Pete Kolbenschlag	Grand Junction
Scott Larsen	Grand Junction
Jim Majors	Fruita
Paul Merluzzi	Loma
Jerry Nolan	Grand Junction
Mark Peterson	Grand Junction
Trish Soldberg	Grand Junction
Matt Sura	Grand Junction
Greg Trainor	Grand Junction
Clay Urban	Grand Junction
Neville Woodruff	Grand Junction

Wilderness Zone	
Name	Location
Doralyn Genova	Grand Junction
Warren Gore	Glade Park
Joe Keys	Clifton
Duane Carr	Grand Junction
Belle Chesnick	Glade Park

Wilderness Zone continued	
Name	Location
Shaun Deeney	Grand Junction
Mike Dirsmith	Grand Junction
Greg Gador	Grand Junction
Terry Gray	Glade Park
Bill Hamman	Grand Junction
Dave Hawks	Grand Junction
Ted Howell	Grand Junction
Jim Majors	Fruita
Celeste Marsh	Grand Junction
Rod Martinez	Grand Junction
Neal McKinstry	Fruita
Brian Moore	Grand Junction
Warren Peterson	Palisade
David Price	Fruita

Table 5-3 Working Group Members	
Shari Raso	Palisade
Eric Rechel	Grand Junction
Bill Schapley, Group Leader	Grand Junction
Bob Sherrill	Fruita
Harold Snyder	Glade Park

5.4 Public Review and Comment on the Draft RMP/EIS

Following the initial phase of public scoping, the official public comment period on the CCNCA Draft RMP/EIS opened upon publication of the draft document in October 2003. The BLM, however, welcomes public input at any time during this planning process.

The BLM distributed a postcard notification and inquiry via first-class mail to approximately 450 contacts on the CCNCA mailing list, announcing the availability of the draft RMP/EIS in various media formats. The CCNCA mailing list includes federal, state, and local elected officials, federally recognized tribes, property owners in and near the CCNCA, individuals, special interest groups, and organizations. Availability of the draft RMP/EIS was also announced by publishing notices in local newspapers and the *Federal Register*, as well as on the project web site (www.co.blm.gov/cocanplan). The Citizen Advisory Council and Working Groups, composed of approximately 120 individuals, were notified by e-mail of the publication of the draft RMP/EIS.

The draft RMP/EIS was provided for public review by bound paper or CD-ROM format upon request, and posted for review or downloading on the project web site. Copies were also available for review at local community libraries.

Along with the monthly Advisory Council meetings in which the public is invited, public open houses were held, from October 2003 to January 2004, during the 90-day public comment period.

5.5

Upon conclusion of the public comment period, all comments received were reviewed and considered, and the draft RMP/EIS revised. Once the proposed RMP/Final EIS is published, the document's availability will be announced in the *Federal Register*. A 30-day public protest period will follow, and any individual considering protesting the proposed plan may meet with the BLM to discuss his or her protest concerns. The BLM Colorado State Director will evaluate and resolve any protests upon closure of the 30-day public protest period. After protests are resolved, the BLM Colorado State Director will publish the approved final RMP and

Record of Decision (ROD) and announce its availability in the *Federal Register*.

5.6 Biological Assessment for U.S. Fish & Wildlife Service Review

In the spring of 2003 the BLM began informal consultation with the U.S. Fish and Wildlife Service concerning the CCNCA/RMP. Preparing a Biological Assessment (BA) is a step in the ESA Section 7 consultation process. The BA was drafted and delivered to the Service for preliminary review. Their review resulted in the determination that if Alternative 3 remained the preferred alternative and did not materially change from its form at that time, and no new relevant information changed the situation, no formal consultation would be needed (letter dated May 20, 2003). The Service recommended a half-mile activity restriction around bald eagle nests between November 15 and July 30. They indicated that the southwestern willow flycatcher could be dropped from analysis on the account of Endangered Species Act (ESA). The Service provided the contacts and information helpful in streamlining reviews under the ESA.

APPENDIX 6

Colorado Canyons National Conservation Area
Desired Plant Community

Devils Canyon

DESIRED PLANT COMMUNITY

Desired plant community (DPC) is a description of a plant community meeting the needs for present and future uses of a particular area. DPC answers the question, "What do we want the plant communities in these areas to look like in the future?"

DPC helps to implement ecosystem management by being ecologically, economically, and socially sound. DPC will help ensure the vegetative communities within an area are compatible with the current or potential uses of that area. DPC combines the vegetative needs of all uses into a common goal rather than having separate goals for each.

The DPC for what is now the Colorado Canyons National Conservation Area was developed by a team of individuals who have an interest in the area. Team members include recreationists, livestock operators, wildlife managers, federal and local government officials, members of environmental organizations, and concerned citizens.

In 1993 an Ecological Site Inventory (ESI) was completed in the Ruby Canyon planning area. ESI is an intensive vegetative inventory that describes the present vegetative communities in the area. The use of ESI helps assure the development of realistic desired plant communities that we know can be obtained. Other vegetative studies, past or present, can also be utilized in the DPC process.

Information on occurrences from the past such as wildfires, prescribed burns, chainings, seedings, and other disturbances can help determine why areas look like they do.

The DPC will guide the BLM in future management of the area. It will help in determining which management actions or activities may or may not lead the Bureau toward its landscape goal. DPC will give us a better understanding on when and where to use the management tools available, such as fire, reseeding, grazing management, or other vegetation manipulation practices. DPC will ensure that vegetative objectives are ecologically based and attainable.

Ruby Canyon Desired Plant Community

Following is the DPC for each of the management zones. The DPC will be described for each ecological site type. Ecological sites are areas that have a potential for producing similar plant communities based upon similar soils, climate, and topography. Each DPC description for an ecological site will contain a table illustrating the current percent composition of trees, shrubs, forbs, warm season grasses, and cool season grasses for each site write-up area (SWA) and the **desired** percent composition. Also included is the ecological status (E = Early, M = Mid, L = Late) in relation to the potential natural community (PNC). Following the table are general notes pertaining to the ecological site. Figure 3-9 (Chapter 3) identifies the ecological sites of the planning area.

The effort focused on describing a DPC description that allowed for changes to occur but still be acceptable. The description also allowed for diversity in seral stages within ecological site types, understanding that this diversity was desirable as well. SWAs not listed in the DPC description were either small units or areas of little concern. The DPC team felt there were a few points that need to be made that are important in understanding the DPC and need to be considered in the future use of it.

- The ESI was completed in an above average year precipitation and production wise.
- It is important to remember that the percent composition figures are derived from production figures for each SWA.
- Pinyon-Juniper production data from the ESI were obtained from charts derived by the Natural Resource Conservation Service and are based upon tree size and density of foliage.
- Sagebrush production figures from the ESI are total leaf production, not just current annual growth.
- Half-shrubs are included with shrubs.
- From the teams standpoint both cheatgrass and cryptogrammic soils are present and will continue to be part of most vegetative communities at some level. Management should discourage any increase in cheatgrass.
- Photographs of various sagebrush composition levels could be useful in illustrating to future personnel exactly what the defined DPC limits may look like, i.e., it is difficult to visualize what 70 percent composition might look like.

North Of River

Overall, the DPC team was satisfied with the current vegetative make-up and condition in the north zone. In general, there were two major areas of focus: 1) Decrease the cheatgrass composition while increasing perennial grasses, and 2) Maintain the shrub and forbs component for antelope habitat.

Ecological Site: **Alkaline Slopes # 297**

Vegetation Type	SWA #						DPC Composition (%)
	35	40	47	100			
	Current Species Composition (%)						
Trees	0	0	0	0			0
Shrubs	11	28	47	39			10 - 50
Forbs	7	22	26	1			5 - 25
W. Grasses	9	14	9	33			5 - 40
C. Grasses	15	2	0	3			5 - 20
Seral Stage	E	M	M	L			E, M or L

Notes:
- Overall, increase perennial grasses particularly cool season and decrease cheatgrass.
- Prefer a mixture of seral stages.
- Maintain shrub and forbs components for antelope forage.

Ecological Site: Semidesert Loam # 325

Vegetation Type	SWA #						DPC Composition (%)
	39	48					
	Current Species Composition (%)						
Trees	0	0					0
Shrubs	23	4					4 - 23
Forbs	15	17					15 - 20
W. Grasses	39	11					10 - 45
C. Grasses	3	64					5 - 65
Seral Stage	M	L					M or L

Notes:
- Prefer a mixture of mid- and late-seral stages to provide diversity of vegetation types.
- A desirable mix of shrubs and grasses are present although an increase in cool season grasses in SWA #39 and shrubs in SWA #48 is desired.

Ecological Site: Semidesert Juniper # 329

Vegetation Type	SWA #						DPC Composition (%)
	1	6	8	14	16	19	
	Current Species Composition (%)						
Trees	0	3	59	72	52	6	0 - 40
Shrubs	47	85	3	1	7	15	30 - 70
Forbs	31	0	1	2	18	23	1 - 15
W. Grasses	2	2	0	1	2	6	10 - 50
C. Grasses	1	5	36	14	21	45	10 - 50
Seral Stage	M	M	L	M	L	M	M or L

Ecological #Site 329 (cont.)

Vegetation Type	SWA #						DPC Composition (%)
	22	25	28	32	33	34	
	Current Species Composition (%)						
Trees	85	0	15	18	35	10	0 - 40
Shrubs	1	72	64	52	50	39	30 - 70
Forbs	7	1	0	14	4	7	1 - 15
W. Grasses	0	0	2	0	4	12	10 - 50
C. Grasses	3	20	3	8	2	3	10 - 50
Seral Stage	M	L	L	L	L	L	M or L

Vegetation Type	SWA #						DPC Composition (%)
	36	105 141	106	109	110		
	Current Species Composition (%)						
Trees	38	48	31	52	0		0 - 40
Shrubs	39	34	59	29	57		30 - 70
Forbs	3	5	0	5	6		1 - 15
W. Grasses	0	2	1	3	12		10 - 50
C. Grasses	12	10	3	11	15		10 - 50
Seral Stage	L	L	M	L	M		M or L

Notes:
- Prefer a mixture of mid- and late-seral stages to provide diversity of vegetation types.
- Most SWAs need an increase in perennial grasses.

Ecological Site: Loamy Saltdesert # 401

Vegetation Type	SWA #						DPC Composition (%)
	24	27	30	31	49	101	
	Current Species Composition (%)						
Trees	0	0	0	0	0	0	0
Shrubs	22	49	31	4	0	52	4 - 35
Forbs	6	0	10	48	20	4	1 - 15
W. Grasses	20	13	12	0	8	26	25 - 60
C. Grasses	12	2	8	29	50	10	15 - 60
Seral Stage	M	M	M	E	--	L	E, M or L

Notes:
-In SWA 27 and 31, maintain Elsa at current percentage and maintain low plant heights for prairie dog habitat.
-Maintain SWA 114 in Late Seral.
-Prefer a mixture of seral stages for diversity.
-Decrease cheatgrass: Cheatgrass composition ranges from 10 to 40% in these SWAs.
-No seral stage is listed for SWA 49 due to the large amount of crested wheat grass.

Ecological Site: Sandy Saltdesert # 402

Vegetation Type	SWA #						DPC Composition (%)
	2	4	5	10	20		
	Current Species Composition (%)						
Trees	0	0	0	0	0		0
Shrubs	12	37	69	5	3		5 - 45
Forbs	11	1	14	18	22		5 - 15
W. Grasses	0	3	1	9	8		10 - 25
C. Grasses	0	5	3	16	6		10 - 25
Seral Stage	E	E	E	M	E		M or L

Ecological Site # 402 (cont.)

Vegetation Type	SWA #						DPC Composition (%)
	38	154 160	165 166				
	Current Species Composition (%)						
Trees	0	0	0				0
Shrubs	50	4	25				5 - 45
Forbs	18	13	8				5 - 15
W. Grasses	8	8	21				10 - 25
C. Grasses	7	16	9				10 - 25
Seral Stage	E	M	M				M or L

Notes:
- Increase perennial grass composition and decrease amount of cheatgrass. Cheatgrass composition ranges from 14 to 76%.
- Prefer mid- and late-seral stages, provides diversity of vegetation types.

Ecological Site: Stony Saltdesert # 404

Vegetation Type	SWA #						DPC Composition (%)
	12	102	104	153			
	Current Species Composition (%)						
Trees	0	0	0	0			0
Shrubs	44	73	66	66			40 - 70
Forbs	33	4	11	11			5 - 20
W. Grasses	10	7	10	10			5 - 25
C. Grasses	9	12	0	0			5 - 25
Seral Stage	M	M	M	M			M or L

Notes:
- Increase cool season grasses in SWA 104 and SWA 153.
- Prefer mid- or late-seral stages.
- Maintain at least a 25% composition of greasewood in SWA 153.

Ecological Site: Saltdesert Breaks #406

Vegetation Type	SWA #						DPC Composition (%)
	7	17	26	46	108	115	
	Current Species Composition (%)						
Trees	0	12	0	28	0	0	5 - 20
Shrubs	50	16	44	12	34	44	10 - 45
Forbs	29	11	11	13	18	11	5 - 20
W. Grasses	4	3	6	28	7	6	5 - 50
C. Grasses	12	31	20	1	13	20	5 - 50
Seral Stage	L	L	L	M	L	L	M or L

Notes:
- Maintain SWA 17 in late seral.
- Prefer mid- or late-seral stages, provides diversity of vegetation types.
- Increase perennial grasses and decrease amount of cheatgrass.

Ecological Site: Silty Saltdesert # 410

Vegetation Type	SWA #						DPC Composition (%)
	42	43	45				
	Current Species Composition (%)						
Trees	0	0	0				0
Shrubs	19	72	41				20 - 60
Forbs	18	10	11				10 - 20
W. Grasses	18	0	28				10 - 20
C. Grasses	23	19	0				10 - 25
Seral Stage	L	L	L				L

Notes:
- Prefer late seral stage, provides diversity of vegetation types.
- Maintain SWA 45 in late seral stage.

Ecological Site: Foothills Juniper # 447

Vegetation Type	SWA #						DPC Composition (%)
	9	13	15	18	21	23	
	Current Species Composition (%)						
Trees	70	51	80	39	50	66	39 - 80
Shrubs	1	23	9	45	35	15	10 - 30
Forbs	13	5	1	15	4	7	5 - 15
W. Grasses	1	0	1	0	2	0	10 - 30
C. Grasses	16	4	1	1	1	9	10 - 30
Seral Stage	PNC	L	L	L	L	PNC	PNC or L

Vegetation Type	SWA #						DPC Composition (%)
	29	37	41	103			
	Current Species Composition (%)						
Trees	55	60	77	55			39 - 80
Shrubs	36	14	18	39			10 - 30
Forbs	0	5	1	7			5 - 15
W. Grasses	3	3	0	0			10 - 30
C. Grasses	0	2	1	0			10 - 30
Seral Stage	L	L	L	L			L

Notes:
- Maintain scattered density of juniper for birds with varied shrub/herb understory in SWAs 9, 37, 41, 110.
- Maintain juniper for sensitive bird species and the rare plants Amsonia jonesii and Cryptantha osterhoutii in SWAs 15 and 21.
- Increase perennial grass cover.

Colorado River Riparian Inventory

The desired riparian plant communities for the Colorado River are diverse; that is, have a variety of species and age classes. Diversity within riparian areas is primarily a function of hydrology. Diverse plant communities are desirable because they provide scenery, wildlife viewing opportunities, shade, and occasional open riverbanks for recreational use by people. Food, cover, nesting habitat, and travel corridors are provided for wildlife as well. Water quality is improved in two ways; moderated water temperatures from shade and reduced sediment loads through vegetation trapping sediment and stabilizing banks.

The riparian vegetative inventory on the Colorado River was less intensive than the Ecological Site Inventory (ESI) used in the uplands. This inventory consisted of defining the following parameters for each Site Write-up Area (SWA) along the river. These parameters were selected based on major vegetative concerns. Table 1 summarizes these parameters for each SWA within the Colorado River inventory.

- Dominant vegetation: The three most dominant species were identified.
- Mature cottonwoods: The presence or absence of mature cottonwoods was noted.
- Cottonwood regeneration: Age classes of cottonwood trees were noted, particularly saplings.
- Exotic species and weeds: The presence of exotic species and weeds was noted, as well as the degree of presence, e.g. high, medium, low.

Table 1

SWA #	Species #1	Species #2	Species #3	M *	C **	W ***
L1	Pofr	Tamarix sp.	Disp	Y	Y	L
L2	Rhtr	Caca	Prunus sp.	N	Y	L
L3	Tamarix sp.	Rhtr	Salix sp.	N	Y	L
L4	Tamarix sp.	Pofr	Rhtr	Y	Y	H
L5	Tamarix sp.	Salix sp.	Carex sp.	N	Y	L
L6	Rhtr	Salix sp.	Caca	N	Y	L
L7	Tamarix sp.	Brte	Artr	N	Y	M
L8	Salix sp.	Carex sp.	Caca	N	Y	L
L9	Tamarix sp.	Salix sp.	Pofr	N	Y	L
L10	Tamarix sp.	Salix sp.	Rhtr	N	Y	M
L11	Tamarix sp.	Salix sp.	Pofr	Y	Y	L
L12	Pofr	Tamarix sp.	Spai	Y	Y	M
L13	Salix sp.	Tamarix sp.	Carex sp.	N	N	L

L14	Salix sp.	Rhtr	Tamarix sp.	N	Y	L
L15	Tamarix sp.	Artr	Pofr	Y	Y	L

Table 1 (cont.)

L16	Salix sp.	Tamarix sp.	Brte	N	Y	H
L18	Salix sp.	Pofr	Tamarix sp.	N	Y	L
L19	Salix sp.	Pofr	Carex sp.	Y	Y	L
L20	Brte	Pofr		Y	Y	M
L21	Salix sp.	Tamarix sp.	Rhtr	Y	Y	L
L22	Pofr	Brte		Y	Y	L
L23	Salix sp.	Tamarix sp.	Pofr	Y	Y	L
L24	Salix sp.	Tamarix sp.	Carex sp.	N	Y	L
R1	Tamarix sp.	Pofr	Disp	Y	Y	H
R2	Salix sp.	Carex sp.	Juncus sp.	N	N	L
R3	Pofr	Elan	Tamarix sp.	Y	N	M
R4	Pofr	Salix sp.		Y	Y	L
R5	Pofr	Tamarix sp.	Carex sp.	Y	Y	M
R6	Pofr	Tamarix sp.	Salix sp.	Y	Y	M
R7	Caca	Salix sp.	Rhtr	N	Y	L
R8	Tamarix sp.	Salix sp.	Pofr	Y	Y	L
R9	Tamarix sp.	Rhtr	Pofr	N	Y	L
R10	Tamarix sp.	Salix sp.	Rhtr	N	Y	L
R11	Tamarix sp.	Salix sp.	Rhtr	N	Y	L
R12	Tamarix sp.	Salix sp.	Rhtr	N	Y	L
R13	Tamarix sp.	Salix sp.	Rhtr	N	Y	L
R14	Tamarix sp.	Salix sp.	Rhtr	Y	Y	L
R15	Rhtr	Tamarix sp.	Chna	Y	N	L
R16	Rhtr	Salix sp.		N	N	L
R17	Tamarix sp.	Rhtr	Pofr	Y	Y	M
R18	Pofr	Tamarix sp.	Rhtr	Y	Y	M
R19	Tamarix sp.	Salix sp.	Rhtr	N	N	L
R20	Tamarix sp.	Salix sp.	Chna	N	N	L
R21	Tamarix sp.	Elan	Salix sp.	N	Y	L
R22	Salix sp.	Pofr	Tamarix sp.	N	Y	M
R23	Rhtr	Tamarix sp.	Salix sp.	Y	N	L
R24	Tamarix sp.	Rhtr	Salix sp.	Y	N	L
R25	Pofr	Tamarix sp.	Salix sp.	Y	Y	L
R26	Tamarix sp.	Salix sp.	Pofr	Y	Y	L
R27	Phco	Salix sp.		N	N	L
R28	Tamarix sp.	Salix sp.		N	N	L
R29	Salix sp.	Tamarix sp.		N	N	L
R30	Juniper sp.			N	N	L
R31	Tamarix sp.	Brte		N	N	L
R32	Rhtr	Tamarix sp.	Disp	N	N	L

R33	Salix sp.	Rhtr		N	N	L
R34	Pofr	Tamarix sp.	Salix sp.	Y	Y	L
R35	Rhtr	Tamarix sp.	Salix sp.	N	N	L
R36	Rhtr	Tamarix sp.	Pofr	Y	Y	L
R37	Rhtr	Pofr	Tamarix sp.	Y	Y	L

Table 1 (cont.)

Species Key: Pofr = Fremont Cottonwood; Tamarix sp. = Saltcedar; Disp = Inland saltgrass; Rhtr = Skunkbush Sumac; Caca = Reedgrass; Prunus sp. = Wildrose; Salix sp. = Willow; Carex sp. = Sedge; Brte = Cheatgrass; Spai = Alkali Sacaton; Juncus = Rush; Elan = Russian Olive; Chna = Rubber Rabbitbrush; Phco. = Canarygrass.

* Presence of Mature Cottonwoods
Y = Yes
N = No

** Cottonwood Regeneration
Y = Yes
N = No

*** Weed Status
H = High
M = Moderate
L = Low

Figures 3-1 and 3-10 (Chapter 3) illustrate the presence of mature cottonwoods, cottonwood regeneration, and weed status in relation to the respective SWA along the Colorado River.

Three primary DPC objectives were identified for the Colorado River based on these parameters.

Objective #1: The Colorado River Corridor will be managed to provide a mosaic of healthy, diverse community types.

As such the existing reed/willow, willow/sedge, willow/cottonwood, skunkbush sumac/reedgrass, skunkbush sumac/willow community types will be maintained. The cottonwood/salt cedar, salt cedar/skunkbush sumac, cottonwood/Russian olive, salt cedar/Russian olive, salt cedar/willow communities will be tolerated due to the lack of an environmentally acceptable method to remove the salt cedar component. Management actions should be directed toward reducing salt cedar.

SWAs L7, L20, L22, R2, R19, R30 and R31 have unacceptable diversity because of complete dominance by exotic species such as cheatgrass or salt cedar. To the extent possible these areas will be managed to improve species composition of native species.

Objective #2: Reduce the current levels of exotic species or weeds where present.

Exotic species like tamarisk (salt cedar), Russian olive, and knapweed are presently a component of the Colorado River riparian community and pose a threat to diversity. Communities with a dominance of exotics are not acceptable.

SWAs L3, L7, L10, R8, R13, R17, R19, R21, R28 and R31 are areas with a dominance of exotics. These areas will be managed to reduce their current levels of exotics or weeds. Other vegetative communities with the presence of exotics will be managed to maintain or reduce their current level. In areas where exotics have not yet been established, every attempt should be made to prevent their introduction.

Objective #3: Preserve mature cottonwood stands and promote cottonwood regeneration.

The species and age class of most interest are mature cottonwoods. They are desirable because they offer special scenic qualities, provide shade for moderating water temperatures, shade for recreationists, and are used by wildlife including the bald eagle, which are given special consideration because of their difficulty in reproducing. Management for mature cottonwoods involves preserving potential recruitment areas, protecting existing stands of mixed-aged cottonwoods, and managing of exotic species.

Preserve mature cottonwoods in SWAs L1, L4, L11, L12, L15, L19, L20, L21, L22, L23, R1, R3, R4, R5, R6, R8, R14, R15, R17, R18, R23, R24, R25, R26, R34, R36, and R37.

Additionally, manage SWAs L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L14, L15, L16, L18, L19, L20, L21, L22, L23, L24, R1, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R17, R18, R21, R22, R25, R26, R34, R36, and R37 to promote existing cottonwood regeneration.

South Of River

Overall, the DPC team dealing with the zone south of the river felt the present vegetative communities were DPC. Given this, the task was to obtain a description that is acceptable and allows for some change. The two major areas of focus for this zone were: 1) acceptable compositions of pinyon and juniper trees and sagebrush, and 2) increasing cool season grasses and reducing cheatgrass.

Ecological Site: Semidesert Loam (UT) # 209

Vegetation Type	SWA #						DPC Composition (%)
	60						
	Current Species Composition (%)						
Trees	0						0
Shrubs	69						25 - 70
Forbs	2						2 - 10
W. Grasses	8						5 - 20
C. Grasses	0						5 - 10
Seral Stage	L						L

Notes:
- Upper limit on sagebrush set at 800 lbs/acre. The higher sagebrush composition is acceptable due to the area being critical deer winter range.
- Decrease cheatgrass and increase cool season grasses.
- Prefer late seral stage.

Ecological Sites: Semi-desert Loam (UT) #209 (*)
Deep Loam #292 (**)
Salt Desert Breaks #406 (***)

Vegetation Type	SWA #						DPC Composition (%)
	* 71	* 77 92 127 134	** 173	** 192	*** 121		
	Current Species Composition (%)						
Trees	0	0	23	0	0		0 - 25
Shrubs	65	80	54	76	61		5 - 70
Forbs	8	0	4	1	8		3 - 25
W. Grasses	8	0	10	4	8		5 - 30
C. Grasses	11	19	8	20	11		5 - 40
Seral Stage	L	L	M	M	L		M or L

Notes:
- It is desirable that 85% of acres within these SWAs fall within the DPC description of mid- or late-seral stages. The remaining 15% could fall into other seral stages. This allows for diversity in seral stages.
- Other seral stages would be recognized by the extreme domination by one particular vegetation type (trees, shrubs, grasses, forbs).
- No trees were recorded in any of the transacts, but some parks have a few trees. A few trees are acceptable.
- SWAs 77, 92, 127 and 134 currently have a composition of sagebrush outside the DPC upper limits.

Ecological Site: Rolling Loam # 298

Vegetation Type	SWA #						DPC Composition (%)
	57 113 117 125	185	179 246	183	188	193 260	
	Current Species Composition (%)						
Trees	0	3	0	0	33	42	0
Shrubs	49	19	61	59	42	39	20 - 60
Forbs	0	0	3	6	1	1	5 - 20
W. Grasses	3	0	6	10	0	0	1 - 20
C. Grasses	46	61	29	21	25	17	20 - 60
Seral Stage	--	--	--	--	--	--	

Ecological Site #298 (cont.)

Vegetation Type	SWA #						DPC Composition (%)
	212	217					
	Current Species Composition (%)						
Trees	0	16					0
Shrubs	63	48					20 - 60
Forbs	2	5					5 - 20
W. Grasses	6	3					1 - 20
C. Grasses	24	21					20 - 60

Seral Stage	M	M					M

Notes:
- Cool season grass component is crested wheat grass.
- Unclassified seral stages are due to a large portion of these areas being comprised of crested wheat grass, a seeded non-native.
- SWAs 212 and 217 represent a desired native community.
- Increase forbs and warm season grass composition in most SWAs.
- Limit sagebrush production to 400 lbs/acre.
- Long-term goal is to have native grasses replace the crested wheat grass.

Ecological Site: Sandy Foothills #310

Vegetation Type	SWA #						DPC Composition (%)
	169	176 244	177	201	206	218	
	Current Species Composition (%)						
Trees	0	78	0	0	0	70	0 - 20
Shrubs	69	17	62	83	77	23	20 - 60
Forbs	13	1	0	6	0	0	5 - 15
W. Grasses	0	0	5	0	0	0	2 - 20
C. Grasses	2	3	30	0	4	3	5 - 50
Seral Stage	E	E	E	E	E	E	M or L

Notes:
- Overall, prefer an increase in perennial grasses, moderate shrub composition and low tree composition.
- Prefer mid- or late-seral stage. Early seral stages indicate dominance of shrubs or trees.

Ecological Site: Semi-desert Loam #327

Vegetation Type	SWA #						DPC Composition (%)
	65	66 94 95 116 122	74 93	175	182	189	
	Current Species Composition (%)						
Trees	0	0	0	0	0	23	0 - 35
Shrubs	71	11	9	65	42	62	5 - 70
Forbs	1	27	16	1	0	4	3 - 20
W. Grasses	8	25	30	7	7	0	5 - 40
C. Grasses	15	14	9	21	44	10	5 - 40
Seral Stage	M	M	M	M	M	M	M or L

Vegetation Type	SWA #						DPC Composition (%)
	194	215	219				
	Current Species Composition (%)						
Trees	0	54	0				0 - 35
Shrubs	79	24	45				5 - 70
Forbs	2	1	0				3 - 20
W. Grasses	0	2	6				5 - 40
C. Grasses	20	15	50				5 - 40
Seral Stage	M	M	L				M or L

Notes:
- It is desirable that 85% of acres within these SWAs fall within the DPC description of mid- or late-seral stages. The remaining 15% could fall into other seral stages. This allows for diversity in seral stages.
- Other seral stages would be recognized by the extreme domination by one particular vegetation type (trees, shrubs, grasses, forbs).

Ecological Site: Semidesert Juniper #329

Vegetation Type	SWA #						DPC Composition (%)
	81	89	90	128	131		
	Current Species Composition (%)						
Trees	67	67	67	67	67		30 - 70
Black Sage	18	18	18	18	18		15 - 25
Shrubs	4	4	4	4	4		1 - 15
Forbs	6	6	6	6	6		5 - 10
W. Grasses	0	0	0	0	0		3 - 20
C. Grasses	4	4	4	4	4		3 - 20
Seral Stage	L	L	L	L	L		L

Notes:
- It is desirable that 80% of acres within these SWAs fall within the DPC description of mid- or late-seral stages. The remaining 20% could fall into other seral stages. This allows for diversity in seral stages.
- Other seral stages would be recognized by the extreme domination by one particular vegetation type (trees, shrubs, grasses, forbs).
- Overall prefer increase in warm and cool season grasses and decrease in trees.

Ecological Site: Loamy Saltdesert #401

Vegetation Type	SWA #						DPC Composition (%)
	63						
	Current Species Composition (%)						
Trees	0						0
Shrubs	26						10 - 35
Forbs	10						5 - 10
W. Grasses	4						10 - 60
C. Grasses	56						15 - 60
Seral Stage	L						L

Notes:
- Good diversity and balance between vegetation types.

- No one vegetation type should exceed 70% composition to maintain diversity.
- Prevent increase in annuals.

Ecological Site: Sandy Saltdesert #402

Vegetation Type	SWA #						DPC Composition (%)
	56	137	138 139	160	164		
	Current Species Composition (%)						
Trees	0	0	0	0	0		0
Shrubs	38	25	37	5	25		30 - 45
Forbs	0	8	3	18	8		2 - 15
W. Grasses	49	21	25	8	21		30 - 45
C. Grasses	5	9	10	17	9		5 - 20
Seral Stage	L	M	M	M	M		M or L

Notes:
- Good diversity and balance of vegetation types.
- Prefer mid- or late-seral stage for diversity.
_ Encourage perennial grasses and decrease cheatgrass.

Ecological Site: Foothills Juniper: #447
Clayey Foothills #289(*)

Vegetation Type	SWA #						DPC Composition (%)
	61	64	68	73	75		
	Current Species Composition (%)						
Juniper	66	41	50	57	79		40 - 80
Pinyon Pine	0	5	6	13	10		0 - 10
Sagebrush	7	24	35	0	0		0 - 30
Other shrubs	13	16	1	9	1		1 - 15
W. Grasses	0	2	1	1	0		5 - 10
C. Grasses	4	8	5	13	2		5 - 15
Seral Stage	L	L	L	PNC	L		M, L, or PNC

Vegetation Type	SWA #						DPC Composition (%)
	76	78	79	* 187 234			
	Current Species Composition (%)						
Juniper	88	78	70	80			40 - 80
Pinyon Pine	0	4	9	0			0 - 10
Sagebrush	0	0	0	10			0 - 30
Other shrubs	0	2	10	1			1 - 15
W. Grasses	0	2	10	2			5 - 10
C. Grasses	5	5	9	7			5 - 15
Seral Stage	L	L	L	L			M, L or PNC

Notes:
- Mid- to-upper limit of sagebrush desirable in SWAs 64 and 68 for deer winter range.
- Prefer that 80% of acreage in these SWAs fall within the DPC description. The remaining 20% could fall into other seral stages. This allows for diversity in seral stages within this ecological site.
- Other seral stages would be recognized by extreme domination by one or two particular vegetation types (trees, shrubs, grasses, forbs or annuals).
- Maintain a high percentage of tree cover in the southern area of the planning unit including SWAs 116, 117, 180, 181, 188, 190, 192, 196, 197, 199, 219, 221, 222, 223, 226, 230, 234, and 247 to discourage movement of bighorn sheep to private land in Glade Park.
- Other SWAs within this ecological site that are not listed above are smaller areas. The preference is that these SWAs be in various seral stages but not necessarily in a particular one. This also allows for diversity of seral stages.

APPENDIX 7

Colorado Canyons National Conservation Area
Known Cultural Resources

Rock Art in the CCNCA

KNOWN CULTURAL RESOURCES
TABLES OF SPECIFIC USE CATEGORIES

Table 1. Isolated finds discharged from management (n = 147).

Site Number	Class	Type	Cultural Affiliation
5ME01006	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME01007	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME01008	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME01009	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME01565	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03656	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME03657	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03658	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03659	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03660	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03661	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03664	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03747	HISTORICAL	ISOLATED FIND	UNKNOWN
5ME03748	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03749	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03750	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03751	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME03774	ARCHAEOLOGICAL	ISOLATED FIND	LATE PREHISTORIC
5ME03856	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME04008	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME04202	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME04398	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME04593	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME04764	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05137	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05138	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05170	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05171	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05538	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05539	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05541	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05542	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05543	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05544	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05545	ARCHAEOLOGICAL	ISOLATED FIND	ARCHAIC
5ME05546	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05547	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05548	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05549	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05550	ARCHAEOLOGICAL	ISOLATED FIND	LATE PREHISTORIC
5ME05963	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05964	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME05966	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME06063	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME06374	ARCHAEOLOGICAL	ISOLATED FIND	FORMATIVE
5ME06381	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME06491	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME06492	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME06794	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME06895	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME06898	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME06907	ARCHAEOLOGICAL	ISOLATED FIND	PALEOINDIAN
5ME07333	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07334	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07335	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07336	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07337	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07338	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07339	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL

Site Number	Class	Type	Cultural Affiliation
5ME07341	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07342	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07343	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07344	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07345	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07346	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07347	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07348	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07350	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME07377	ARCHAEOLOGICAL	ISOLATED FIND	OSHARA
5ME08023	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME08024	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME08026	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME08027	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME08028	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11229	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME11233	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME11235	HISTORICAL	ISOLATED ARTIFACT	EURO-AMERICAN
5ME11246	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME11262	ARCHAEOLOGICAL	ISOLATED FIND	ABORIGINAL
5ME11322	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11323	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11339	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11340	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11344	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11345	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11358	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11359	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME11362	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11364	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME11370	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN ABORIGINAL
5ME11645	HISTORICAL	ISOLATED ARTIFACT	UTE
5ME11783	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11784	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11785	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11786	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11787	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11900	HISTORICAL	ISOLATED FIND	EURO-AMERICAN
5ME11902	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN PREHISTORIC
5ME11995	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME11996	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12184	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12185	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12186	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12187	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12188	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12189	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12190	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12191	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12192	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12193	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12194	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12195	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12196	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12197	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12198	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12199	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12200	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12220	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12221	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12222	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12227	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12228	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12229	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12230	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME12321	HISTORICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12322	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12323.1	HISTORICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12323.2	HISTORICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12324	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12325	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12326	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12327	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12328	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12329	HISTORICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12330	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME12335	HISTORICAL	ISOLATED FIND	UNKNOWN
5ME12336	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME12337	ARCHAEOLOGICAL	ISOLATED FIND	UNKNOWN
5ME13031	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13032	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13033	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13034	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13035	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13036	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13037	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13038	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN
5ME13039	ARCHAEOLOGICAL	ISOLATED ARTIFACT	UNKNOWN

Table 2. Sites not eligible for nomination to the NRHP allocated to experimental use (n = 102).

Site Number	Class	Type	Cultural Affiliation
5ME00105	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00106	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00109	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00307	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00432	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00433	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00434	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	UNKNOWN
5ME00435	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00436	HISTORICAL	HISTORIC, CAMP	UNKNOWN
5ME00437	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00438	ARCHAEOLOGICAL	OPEN LITHIC; STONE QUARRY	UNKNOWN
5ME00439	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00440	ARCHAEOLOGICAL	STONE QUARRY; OPEN CAMP	UNKNOWN
5ME00441	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00442	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00443	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC; HISTORIC, CAMP	UNKNOWN
5ME00444	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00491	HISTORICAL	DUGOUT	UNKNOWN
5ME00492	HISTORICAL	RANCH	UNKNOWN
5ME00495	HISTORICAL	SHED	UNKNOWN
5ME00496	HISTORICAL	TRAIL	UNKNOWN
5ME00498	HISTORICAL	TRAIL, INSCRIPTION PANEL	EURO-AMERICAN
5ME00499	HISTORICAL	CAMP; ROCK ART	UNKNOWN
5ME00525	ARCHAEOLOGICAL	OPEN LITHIC	ARCHAIC
5ME00527	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00528	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00533	ARCHAEOLOGICAL-HISTORICAL	SHELTERED CAMP; BORROW PIT?; TRASH	ARCHAIC; UNKNOWN HISTORIC
5ME00534	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00535	ARCHAEOLOGICAL	SINGLE FEATURE	FREMONT
5ME00537	ARCHAEOLOGICAL	SHELTERED LITHIC	ARCHAIC
5ME00756	HISTORICAL	HISTORIC, STONE CIRCLE	UNKNOWN
5ME00798	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00925	HISTORICAL	CISTERN	UNKNOWN
5ME03754	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME03756	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC; TRASH DUMP	UNKNOWN
5ME04113	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME04203	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME04204	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME04205	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME04692	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME04856	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME04945	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME05136	ARCHAEOLOGICAL	OPEN LITHIC,	UNKNOWN
5ME05217	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME05224	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME05248	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME05258	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME05965	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME05967	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME06027	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06037	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME06156	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME06157	ARCHAEOLOGICAL	ROCK ART	UNKNOWN
5ME06158	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME06159	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME06373	ARCHAEOLOGICAL	UNKNOWN	UNKNOWN
5ME06375	HISTORICAL	HISTORIC, CAMP	UNKNOWN
5ME06487	ARCHAEOLOGICAL	OPEN CAMP	ARCHAIC?; FREMONT?; PREHISTORIC UTE?
5ME06488	ARCHAEOLOGICAL	OPEN CAMP	MIDDLE ARCHAIC, LATE PREHISTORIC
5ME06490	ARCHAEOLOGICAL	OPEN CAMP	UTE
5ME06784	HISTORICAL	HISTORIC; HABITATION	EURO-AMERICAN
5ME06785	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06786	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	UNKNOWN ABORIGINAL
5ME06881	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06882	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06883	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06885	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06886	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06887	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06889	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06896	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06897	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME07029	HISTORICAL	HISTORIC; ROCK ALIGNMENT	UNKNOWN
5ME07122	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME08025	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5MEI1228	HISTORICAL	ROCK ART	UNKNOWN
5MEI1338	ARCHAEOLOGICAL	OPEN LITHIC	LATE PREHISTORIC, PROTOHISTORIC
5ME11346	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME11460	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME11779	ARCHAEOLOGICAL	OPEN LITHIC	UTE?
5ME11781	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME11788	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME11802	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11896	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC; HISTORIC, TRASH SCATTER	UNKNOWN PREHISTORIC; EURO-AMERICAN
5ME11897	HISTORICAL	HISTORIC, TRASH SCATTER	EURO-AMERICAN
5ME11899	HISTORICAL	HISTORIC, TRASH SCATTER	EURO-AMERICAN
5ME11901	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME11931	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME11993	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME12176	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME12177	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC; HISTORIC, CAMP	UNKNOWN PREHISTORIC; EURO-AMERICAN
5ME12178	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME12180	HISTORICAL	HISTORIC, CAMP	EURO-AMERICAN
5ME12182	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME12332	ARCHAEOLOGICAL	OPEN CAMP?	UNKNOWN
5ME12354	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME12356	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME12479	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME13025	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME13026	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME13028	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME13030	ARCHAEOLOGICAL	LITHIC SCATTER	FREMONT

Table 3. Sites allocated to scientific use because they have not been evaluated for NRHP eligibility (n = 54).

Site Number	Class	Type	Cultural Affiliation
5ME00133	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00138	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00139	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00140	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00200	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNKNOWN
5ME00453	ARCHAEOLOGICAL	SHELTERED CAMP; BURIAL	PUEBLO I?
5ME00493	HISTORICAL	MINING CAMP	UNKNOWN
5ME00494	HISTORICAL	TRAIL; ROCK ART; CORRAL	UNKNOWN
5ME00497	HISTORICAL	UNKNOWN	UNKNOWN
5ME00651	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00652	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00653	ARCHAEOLOGICAL-HISTORICAL	SHELTERED ARCHITECTURAL; CABIN	FREMONT
5ME00659	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00660	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00749	HISTORICAL	HISTORIC, SHED	UNKNOWN
5ME00754	HISTORICAL	HISTORIC, CABIN	UNKNOWN
5ME00830	ARCHAEOLOGICAL-HISTORICAL	ROCK ART	UNKNOWN
5ME01162	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME01356	ARCHAEOLOGICAL	ROCK ART	UNKNOWN; UTE?
5ME01640	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME03773	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME04112	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME04844	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME05135	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME06061	HISTORICAL	SINGLE FEATURE	EURO-AMERICAN
5ME06064	ARCHAEOLOGICAL	SINGLE FEATURE	UNKNOWN
5ME06065	ARCHAEOLOGICAL	SHELTERED CAMP	PREHISTORIC
5ME06382	ARCHAEOLOGICAL	UNKNOWN	UNKNOWN
5ME06481	ARCHAEOLOGICAL	POSSIBLE BURIAL	UNKNOWN
5ME06482	ARCHAEOLOGICAL	UNKNOWN	UNKNOWN
5ME06797	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME06798	ARCHAEOLOGICAL	UNKNOWN	LATE PALEOINDIAN, EARLY ARCHAIC
5ME11230	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11231	ARCHAEOLOGICAL	SURFACE QUARRY	UNKNOWN
5ME11232	HISTORICAL	DUGOUT	EURO-AMERICAN
5ME11234	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11236	HISTORICAL	DUGOUT	EURO-AMERICAN
5ME11237	HISTORICAL	CORRAL	EURO-AMERICAN
5ME11238	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11240	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11241	ARCHAEOLOGICAL	LIHIC SCATTER	UNKNOWN
5ME11242	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11243	ARCHAEOLOGICAL	LITHIC SCATTER & SURFACE QUARRY	UNKNOWN
5ME11244	ARCHAEOLOGICAL	SURFACE QUARRY	UNKNOWN
5ME11245	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11247	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11248	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11249	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME12316	HISTORICAL	ROCK ART	UNKNOWN
5ME12317	ARCHAEOLOGICAL	ROCK ART	UNKNOWN
5ME12318	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME12319	HISTORICAL	ROCK ART	UNKNOWN
5ME12320.1	HISTORICAL	ROAD SEGMENT	UNKNOWN
5ME12320.2	HISTORICAL	ROAD SEGMENT	UNKNOWN

Table 4. NRHP-eligible and need data sites allocated to scientific use (n = 172).

Site Number	Class	Type	Cultural Affiliation
42GR00708	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
42GR02178	ARCHAEOLOGICAL	ROCK ART	UNKNOWN
42GR02180	ARCHAEOLOGICAL	HABITATION, ROCK ART	FREMONT
42GR02181	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00073	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00086	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00087	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00088	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	UNKNOWN
5ME00089	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00090	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00091	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00092	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00093	HISTORICAL	HISTORIC CAMP	UNKNOWN
5ME00094	ARCHAEOLOGICAL-HISTORICAL	ROCK ART	UNKNOWN; EURO-AMERICAN
5ME00095	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00096	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNCOMPAHGRE COMPLEX
5ME00201	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00202	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00203	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00302	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00304	ARCHAEOLOGICAL-HISTORICAL	SHELTERED LITHIC; HISTORIC, CAMP	FREMONT;EURO-AMERICAN
5ME00305	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00308	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00309	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN; FREMONT
5ME00310	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00315	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00316	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00318	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME00452	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC; LATE PREHISTORIC
5ME00485	HISTORICAL	HISTORIC, MINE	EURO-AMERICAN
5ME00486	HISTORICAL	MINE?	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME00487	HISTORICAL	SHED	UNKNOWN
5ME00488	HISTORICAL	STRUCTURE, STONE; CISTERN	UNKNOWN
5ME00489	HISTORICAL	HABITATION	UNKNOWN
5ME00490	HISTORICAL	STORAGE STRUCTURE	UNKNOWN
5ME00506	ARCHAEOLOGICAL	SHELTERED CAMP	FREMONT?
5ME00507	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00508	ARCHAEOLOGICAL	OPEN CAMP	LATE ARCHAIC
5ME00509	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00523	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00524	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00526	ARCHAEOLOGICAL	ROCK ART; SHELTERED CAMP	UNKNOWN
5ME00529	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FREMONT
5ME00530	ARCHAEOLOGICAL	SHELTERED CAMP	FREMONT
5ME00531	ARCHAEOLOGICAL	OPEN CAMP	ARCHAIC
5ME00532	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL; ROCK ART	FREMONT
5ME00536	ARCHAEOLOGICAL-HISTORICAL	SHELTERED CAMP, HISTORIC, CAMP	ARCHAIC; UNKNOWN HISTORIC
5ME00539	ARCHAEOLOGICAL	SHELTERED LITHIC	ARCHAIC
5ME00540	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FORMATIVE STAGE
5ME00541	ARCHAEOLOGICAL	SHELTERED CAMP	SHOSHONEAN?
5ME00542	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00543	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00544	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00545	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNKNOWN
5ME00546	ARCHAEOLOGICAL	OPEN LITHIC	ARCHAIC
5ME00662	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00663	ARCHAEOLOGICAL	UNKNOWN	UNKNOWN
5ME00664	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00665	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00666	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00667	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00668	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00670	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00671	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00673	ARCHAEOLOGICAL-HISTORICAL	HISTORIC, PETROGLYPHS, OPEN LITHIC	UNKNOWN
5ME00674	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00675	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00676	ARCHAEOLOGICAL-HISTORICAL	HISTORIC, PETROGLYPHS, OPEN LITHIC	UNKNOWN
5ME00677	ARCHAEOLOGICAL-HISTORICAL	ROCK ART; HISTORIC, ROCK ART	EURO-AMERICAN; FREMONT
5ME00678	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00679	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00711	ARCHAEOLOGICAL	SINGLE FEATURE	FREMONT
5ME00726	HISTORICAL	HISTORIC, GRAVEL PIT	UNKNOWN
5ME00774	HISTORICAL	UNKNOWN	UNKNOWN
5ME00792	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FREMONT
5ME00848	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME00859	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00884	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNKNOWN
5ME00885	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00886	ARCHAEOLOGICAL	ROCK ART	UNKNOWN
5ME00887	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00888	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00889	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00890	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME00891	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00892	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00893	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00894	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME00895	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00896	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00897	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN

Site Number	Class	Type	Cultural Affiliation
5ME00898	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00899	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME00900	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00901	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNKNOWN
5ME00902	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00903	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00904	ARCHAEOLOGICAL	SINGLE FEATURE	UNKNOWN
5ME00906	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00926	HISTORICAL	CAMP	UNKNOWN
5ME01065	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC	UNKNOWN
5ME01184	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME01209	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME01326	ARCHAEOLOGICAL	OPEN LITHIC	ARCHAIC
5ME01327	ARCHAEOLOGICAL	OPEN LITHIC	ARCHAIC
5ME01485	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN
5ME01547	ARCHAEOLOGICAL	OPEN CAMP	MIDDLE ARCHAIC; FREMONT
5ME01562	ARCHAEOLOGICAL	OPEN CAMP	FREMONT
5ME03742	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	ARCHAIC; FREMONT; LATE PREHISTORIC
5ME03755	ARCHAEOLOGICAL-HISTORICAL	OPEN CAMP	FREMONT
5ME03772	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME04384	HISTORICAL	SINGLE FEATURE	UNKNOWN
5ME04842	ARCHAEOLOGICAL	STONE QUARRY	UNKNOWN
5ME04946	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME05094	HISTORICAL	BRIDGE	UNKNOWN
5ME05176	ARCHAEOLOGICAL	SHELTERED CAMP	UTE; FREMONT
5ME05177	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME05247	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME05856	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME06034	ARCHAEOLOGICAL-HISTORICAL	OPEN LITHIC; HISTORIC; TRASH SCATTER	PREHISTORIC UNKNOWN; EURO-AMERICAN
5ME06038	ARCHAEOLOGICAL	OPEN CAMP	ARCHAIC
5ME06125	ARCHAEOLOGICAL	OPEN CAMP	FREMONT; PREHISTORIC UTE
5ME06155	ARCHAEOLOGICAL	SHELTERED LITHIC	UNKNOWN
5ME06376	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN ABORIGINAL
5ME06377	ARCHAEOLOGICAL	SHELTERED CAMP	LATE PREHISTORIC
5ME06489	ARCHAEOLOGICAL	OPEN CAMP	EARLY ARCHAIC, LATE PREHISTORIC
5ME06796	ARCHAEOLOGICAL	SINGLE FEATURE	FORMATIVE
5ME06800	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN ABORIGINAL
5ME06801	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06884	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06888	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06890	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06891	ARCHAEOLOGICAL	OPEN CAMP?	FORMATIVE
5ME06892	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06893	ARCHAEOLOGICAL	ROCK ART; OPEN LITHIC	UNKNOWN ABORIGINAL
5ME06894	HISTORICAL	HISTORIC; CCC CAMP	EUROAMERICAN
5ME06986	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME06987	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL

Site Number	Class	Type	Cultural Affiliation
5ME07327	ARCHAEOLOGICAL	OPEN LITHIC	UNKNOWN ABORIGINAL
5ME07329	ARCHAEOLOGICAL	OPEN LITHIC	PALEOINDIAN
5ME07330	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN ABORIGINAL
5ME07331	ARCHAEOLOGICAL	OPEN CAMP	PROTOHISTORIC?
5ME07332	ARCHAEOLOGICAL	OPEN CAMP	LATE ARCHAIC; LATE PREHISTORIC
5ME07351.1	HISTORICAL	HISTORIC; RAILROAD STATION	EURO-AMERICAN
5ME07351.4	HISTORICAL	HISTORIC, RAILROAD GRADE	EURO-AMERICAN
5ME07351.6	HISTORICAL	HISTORIC, RAILROAD	UNKNOWN
5ME11033	ARCHAEOLOGICAL	LITHIC SCATTER	UNKNOWN
5ME11034	ARCHAEOLOGICAL	HEARTH	UNKNOWN
5ME11035	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11036	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11239	ARCHAEOLOGICAL	OPEN CAMP	LATE ARCHAIC, FORMATIVE
5ME11336	ARCHAEOLOGICAL	SHELTERED CAMP, ROCK ART	FREMONT
5ME11337	ARCHAEOLOGICAL	OPEN CAMP	FREMONT
5ME11341	ARCHAEOLOGICAL	SHELTERED CAMP?	UNKNOWN ABORIGINAL
5ME11363	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	FREMONT
5ME11365	ARCHAEOLOGICAL	SINGLE FEATURE	UNKNOWN ABORIGINAL
5ME11371	ARCHAEOLOGICAL	OPEN ARCHITECTURAL?	LATE PREHISTORIC
5ME11382	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN ABORIGINAL
5ME11739	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11777	ARCHAEOLOGICAL-HISTORICAL	OPEN CAMP; HISTORIC, FENCE	UNKNOWN; EURO-AMERICAN
5ME11778	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11780	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11782	ARCHAEOLOGICAL	SHELTERED CAMP	FREMONT, UTE
5ME11898	ARCHAEOLOGICAL	OPEN LITHIC	PREHISTORIC UNKNOWN
5ME12179	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME12181	ARCHAEOLOGICAL-HISTORICAL	OPEN CAMP; HISTORIC, CAMP	UNKNOWN PREHISTORIC; EURO-AMERICAN
5ME12183	ARCHAEOLOGICAL	OPEN CAMP	FORMATIVE; LATE PREHISTORIC
5ME12333	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME12334	ARCHAEOLOGICAL	OPEN CAMP?	UNKNOWN
5ME12355	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME13027	ARCHAEOLOGICAL	SHELTERED CAMP	EARLY ARCHAIC
5ME13029	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN

Figure 5. Eligible rock art panels allocated to conservation for future use (n = 12).

5ME00454	ARCHAEOLOGICAL	ROCK ART	FREMONT
5ME00458	ARCHAEOLOGICAL	ROCK ART	FREMONT
5ME00529	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FREMONT
5ME00532	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL; ROCK ART	FREMONT
5ME00538	ARCHAEOLOGICAL	ROCK ART	FREMONT
5ME00540	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FORMATIVE STAGE
5ME00792	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FREMONT
5ME05259	ARCHAEOLOGICAL	ROCK ART	LATE ARCHAIC; FORMATIVE
5ME11336	ARCHAEOLOGICAL	SHELTERED CAMP, ROCK ART	FREMONT
5ME11343	ARCHAEOLOGICAL	OPEN LITHIC, ROCK ART	UNKNOWN ABORIGINAL
5ME11360	ARCHAEOLOGICAL	ROCK ART	UNKNOWN

5ME1136I	ARCHAEOLOGICAL	ROCK ART PANEL	ABORIGINAL FREMONT

Figure 6. Sites with Ute components allocated to traditional use (n = 5).

Site Number	Class	Type	Cultural Affiliation
5ME00905	ARCHAEOLOGICAL	SHELTERED CAMP	UTE
5ME05174	ARCHAEOLOGICAL-HISTORICAL	ROCK ART; HISTORIC, ROCK ART	FREMONT, UTE; UNKNOWN HISTORIC
5ME06908 (BLACK RIDGE WICKIUPS)	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	UTE
5ME11324	ARCHAEOLOGICAL	SHELTERED CAMP, ROCK ART	PROTOHISTORIC, UTE; FREMONT
5ME11342	ARCHAEOLOGICAL	ROCK ART	LATE PREHISTORIC, PROTOHISTORIC, FREMONT, UTE

Figure 7. At-risk sites (n = 38).

Site Number	Class	Type	Cultural Affiliation
42GR02180	ARCHAEOLOGICAL	HABITATION, ROCK ART	FREMONT
42GR0218I	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00088	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	UNKNOWN
5ME00096	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNCOMPAHGRE COMPLEX
5ME00202	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00302	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00452	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC; LATE PREHISTORIC
5ME00529	ARCHAEOLOGICAL	SHELTERED CAMP; ROCK ART	FREMONT
5ME00536	ARCHAEOLOGICAL-HISTORICAL ARCHAEO	SHELTERED CAMP, HISTORIC, CAMP	ARCHAIC; UNKNOWN HISTORIC
5ME00544	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00663	ARCHAEOLOGICAL	UNKNOWN	UNKNOWN
5ME00679	ARCHAEOLOGICAL	SHELTERED CAMP	ARCHAIC
5ME00888	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME00889	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00900	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME00901	ARCHAEOLOGICAL	SHELTERED ARCHITECTURAL	UNKNOWN
5ME00902	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME01547	ARCHAEOLOGICAL	OPEN CAMP	MIDDLE ARCHAIC; FREMONT
5ME01562	ARCHAEOLOGICAL	OPEN CAMP	FREMONT
5ME04946	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME05176	ARCHAEOLOGICAL	SHELTERED CAMP	UTE; FREMONT
5ME05247	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN
5ME05259	ARCHAEOLOGICAL	ROCK ART	LATE ARCHAIC; FORMATIVE
5ME06125	ARCHAEOLOGICAL	OPEN CAMP	FREMONT; PREHISTORIC UTE
5ME06376	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN ABORIGINAL
5ME06377	ARCHAEOLOGICAL	SHELTERED CAMP	LATE PREHISTORIC
5ME06489	ARCHAEOLOGICAL	OPEN CAMP	EARLY ARCHAIC, LATE PREHISTORIC
5ME06796	ARCHAEOLOGICAL	SINGLE FEATURE	FORMATIVE
5ME06908	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	UTE?
5ME07332	ARCHAEOLOGICAL	OPEN CAMP	LATE ARCHAIC; LATE PREHISTORIC

5ME11324	ARCHAEOLOGICAL	SHELTERED CAMP, ROCK ART	PROTOHISTORIC, UTE; FREMONT
5ME11337	ARCHAEOLOGICAL	OPEN CAMP	FREMONT
5ME11363	ARCHAEOLOGICAL	OPEN ARCHITECTURAL	FREMONT
5ME11365	ARCHAEOLOGICAL	SINGLE FEATURE	UNKNOWN ABORIGINAL
5ME11382	ARCHAEOLOGICAL	SHELTERED CAMP	UNKNOWN ABORIGINAL
5ME11777	ARCHAEOLOGICAL-HISTORICAL ARCHAEO	OPEN CAMP; HISTORIC, FENCE	UNKNOWN; EURO-AMERICAN
5ME11778	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN
5ME11780	ARCHAEOLOGICAL	OPEN CAMP	UNKNOWN

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